GREE
Change for Life

Service Manual

MODELS: GWH(07)UA-K3DNA1A/I
GWH(09)UA-K3DNA1A/I
GWH(12)UB-K3DNA1A/I
GWH(18)UC-K3DNA1A/I
GWH(07)UA-K3DNA1A/I(Cold Plasma)
GWH(09)UA-K3DNA1A/I(Cold Plasma)
GWH(12)UB-K3DNA1A/I(Cold Plasma)
GWH(18)UC-K3DNA1A/I(Cold Plasma)

GREE ELECTRIC APPLIANCES,INC.OF ZHUHAI

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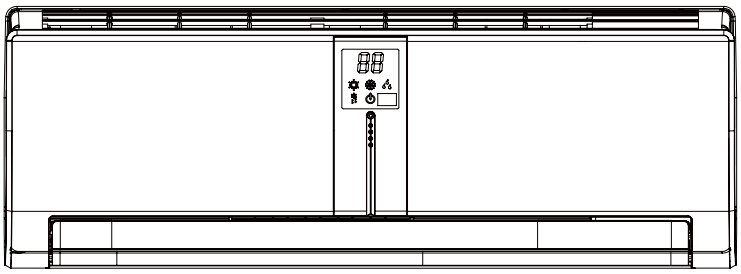
Summary and Features

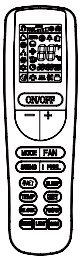
Indoor Unit:

GWH(07)UA-K3DNA1A/I
GWH(09)UA-K3DNA1A/I
GWH(12)UB-K3DNA1A/I
GWH(18)UC-K3DNA1A/I



Remote Controller:

YAA1FB1



1. Safety Precautions

Installing, starting up, and servicing air conditioner can be hazardous due to system pressure, electrical components, and equipment location, etc.

Only trained, qualified installers and service personnel are allowed to install, start-up, and service this equipment. Untrained personnel can perform basic maintenance functions such as cleaning coils. All other operations should be performed by trained service personnel.

When handling the equipment, observe precautions in the manual and on tags, stickers, and labels attached to the equipment. Follow all safety codes. Wear safety glasses andwork gloves. Keep quenching cloth and fire extinguisher nearby when brazing.

Read the instructions thoroughly and follow all warnings or cautions in literature and attached to the unit. Consult local building codes and current editions of national as well as local electrical codes.

Recognize the following safety information:

⚠ Warning	Incorrect handling could result in personal injury or death.
⚠ Caution	Incorrect handling may result in minor injury,or damage to product or property.

⚠ Warning

All electric work must be performed by a licensed technician according to local regulations and the instructions given in this manual.

- Before installing, modifying, or servicing system, main electrical disconnect switch must be in the OFF position. There may be more than 1 disconnect switch. Lock out and tag switch with a suitable warning label.
- Never supply power to the unit unless all wiring and tubing are completed, reconnected and checked.
- This system adopts highly dangerous electrical voltage. Incorrect connection or inadequate grounding can cause personal injury or death. Stick to the wiring diagram and all the instructions when wiring.
- Have the unit adequately grounded in accordance with local electrical codes.
- Have all wiring connected tightly. Loose connection may lead to overheating and a possible fire hazard.

All installation or repair work shall be performed by your dealer or a specialized subcontractor as there is the risk of fire, electric shock, explosion or injury.

- Make sure the outdoor unit is installed on a stable, level surface with no accumulation of snow, leaves, or trash beside.
- Make sure the ceiling/wall is strong enough to bear the weight of the unit.
- Make sure the noise of the outdoor unit does not disturb neighbors.
- Follow all the installation instructions to minimize the risk of damage from earthquakes, typhoons or strong winds.
- Avoid contact between refrigerant and fire as it generates poisonous gas.
- Apply specified refrigerant only. Never have it mixed with any other refrigerant. Never have air remain in the refrigerant line as it may lead to rupture and other hazards.
- Make sure no refrigerant gas is leaking out when installation is completed.
- Should there be refrigerant leakage, the density of refrigerant in the air shall in no way exceed its limited value, or it may lead to explosion.
- Keep your fingers and clothing away from any moving parts.
- Clear the site after installation. Make sure no foreign objects are left in the unit.
- Always ensure effective grounding for the unit.

⚠ Caution

- Never install the unit in a place where a combustible gas might leak, or it may lead to fire or explosion.
- Make a proper provision against noise when the unit is installed at a telecommunication center or hospital.
- Provide an electric leak breaker when it is installed in a watery place.
- Never wash the unit with water.
- Handle unit transportation with care. The unit should not be carried by only one person if it is more than 20kg.
- Never touch the heat exchanger fins with bare hands.
- Never touch the compressor or refrigerant piping without wearing glove.
- Do not have the unit operate without air filter.
- Should any emergency occur, stop the unit and disconnect the power immediately.
- Properly insulate any tubing running inside the room to prevent the water from damaging the wall.

2. Specifications

2.1 Unit Specifications

Model		GWH(07)UA-K3DNA1A/I	GWH(07)UA-K3DNA1A/I (Cold Plasma)
Product Code		CB204N01800	CB204N01801
Rated Voltage	V	220-240	220-240
Rated Frequency	Hz	50	50
Phases		1	1
Min/Max Voltage	V	198/264	198/264
Cooling Capacity	KW	2.1	2.1
Heating Capacity	KW	2.6	2.6
Air flow volume(max~min)	m^3/h	450/420/380/330/300/280/260	450/420/380/330/300/280/260
Dehumidifying Volume	L/h	0.8	0.8
Fan Type		Cross-flow	Cross-flow
Fan Diameter-height	mm	Φ81X643	Φ81X643
Cooling Fan Motor Speed(max~min)	rpm	1400/1200/1100/1000/900/800/700	1400/1200/1100/1000/900/800/700
Heating Fan Motor Speed(max~min)	rpm	1380/1250/1170/1090/1020/950/900	1380/1250/1170/1090/1020/950/900
Fan Motor Power Output	W	10	10
Fan motor Running Current	A	0.13	0.13
Fan Motor Capacitor	μF	1	1
Evaporator Material		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
Evaporator Pipe Diameter	mm	Φ7	Φ7
Evaporator Number of Rows-Fin Pitch	mm	2-1.5	2-1.5
Evaporator Length(L) X Height(H) X Width(W)	mm	635X286X25.4	635X286X25.4
Fuse Current	A	3.15	3.15
Sound Pressure Level (max~min)	dB(A)	37/35/32/30/28/26/24	37/35/32/30/28/26/24
Sound Power Level (max~min)	dB(A)	47/45/42/40/38/36/34	47/45/42/40/38/36/34
Dimension of Outline (WXHXD)	mm	860X153X299	860X153X299
Dimension of Carton Box (LXWXH)	mm	941X383X232	941X383X232
Dimension of Package (LXWXH)	mm	944X386X247	944X386X247
Net Weight	kg	9.5	9.5
Gross Weight	kg	12.5	12.5
Liquid pipe	mm	Φ6	Φ6
Gas Pipe(to indoor unit)	mm	Φ9.52	Φ9.52

The above data is subject to change without notice. Please refer to the nameplate of the unit.

Model		GWH(09)UA-K3DNA1A/I	GWH(09)UA-K3DNA1A/I (Cold Plasma)
Product Code		CB204N01900	CB204N01901
Rated Voltage	V	220-240	220-240
Rated Frequency	Hz	50	50
Phases		1	1
Min/Max Voltage	V	198/264	198/264
Cooling Capacity	KW	2.6	2.6
Heating Capacity	KW	2.8	2.8
Air flow volume(max~min)	m^3/h	450/420/380/330/300/280/260	450/420/380/330/300/280/260
Dehumidifying Volume	L/h	0.8	0.8
Fan Type		Cross-flow	Cross-flow
Fan Diameter-height	mm	Φ81X643	Φ81X643
Cooling Fan Motor Speed(max~min)	rpm	1400/1200/1100/1000/900/800/700	1400/1200/1100/1000/900/800/700
Heating Fan Motor Speed(max~min)	rpm	1380/1250/1170/1090/1020/950/900	1380/1250/1170/1090/1020/950/900
Fan Motor Power Output	W	10	10
Fan motor Running Current	A	0.13	0.13
Fan Motor Capacitor	μF	1	1
Evaporator Material		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
Evaporator Pipe Diameter	mm	Φ7	Φ7
Evaporator Number of Rows-Fin Pitch	mm	2-1.5	2-1.5
Evaporator Length(L) X Height(H) X Width(W)	mm	635X286X25.4	635X286X25.4
Fuse Current	A	3.15	3.15
Sound Pressure Level (max~min)	dB(A)	38/35/32/30/28/26/24	38/35/32/30/28/26/24
Sound Power Level (max~min)	dB(A)	48/45/42/40/38/36/34	48/45/42/40/38/36/34
Dimension of Outline (WXHXD)	mm	860X153X299	860X153X299
Dimension of Carton Box (LXWXH)	mm	941X383X232	941X383X232
Dimension of Package (LXWXH)	mm	944X386X247	944X386X247
Net Weight	kg	9.5	9.5
Gross Weight	kg	12.5	12.5
Liquid pipe	mm	Φ6	Φ6
Gas Pipe(to indoor unit)	mm	Φ9.52	Φ9.52

The above data is subject to change without notice. Please refer to the nameplate of the unit.

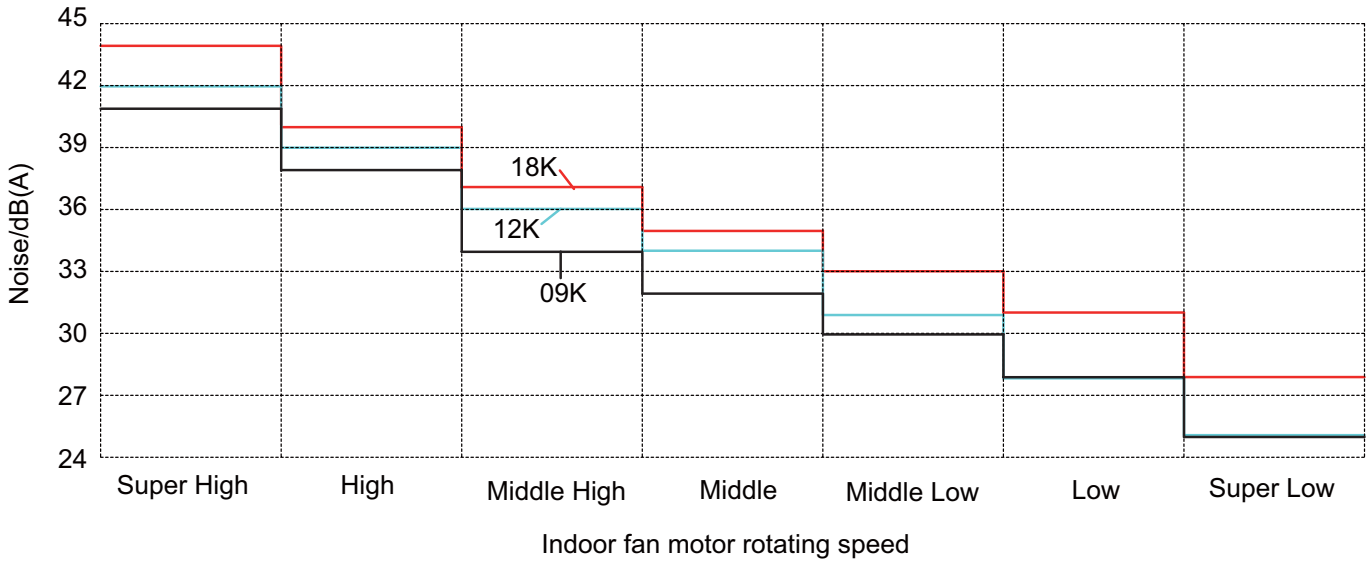
Model		GWH(12)UB-K3DNA1A/I	GWH(12)UB-K3DNA1A/I (Cold Plasma)
Product Code		CB204N02000	CB204N02001
Rated Voltage	V	220-240	220-240
Rated Frequency	Hz	50	50
Phases		1	1
Min/Max Voltage	V	198/264	198/264
Cooling Capacity	KW	3.5	3.5
Heating Capacity	KW	3.8	3.8
Air flow volume(max~min)	m^3/h	560/440/400/350/320/300/280	560/440/400/350/320/300/280
Dehumidifying Volume	L/h	1.4	1.4
Fan Type		Cross-flow	Cross-flow
Fan Diameter-height	mm	Φ85X687	Φ85X687
Cooling Fan Motor Speed(max~min)	rpm	1400/1250/1150/1050/950/850/700	1400/1250/1150/1050/950/850/700
Heating Fan Motor Speed(max~min)	rpm	1400/1270/1180/1100/1040/980/900	1400/1270/1180/1100/1040/980/900
Fan Motor Power Output	W	20	20
Fan motor Running Current	A	0.2	0.2
Fan Motor Capacitor	μF	1	1
Evaporator Material		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
Evaporator Pipe Diameter	mm	Φ7	Φ7
Evaporator Number of Rows-Fin Pitch	mm	2-1.4	2-1.4
Evaporator Length(L) X Height(H) X Width(W)	mm	670X324X25.4	670X324X25.4
Fuse Current	A	3.15	3.15
Sound Pressure Level (max~min)	dB(A)	39/36/34/31/28/27/23	39/36/34/31/28/27/23
Sound Power Level (max~min)	dB(A)	49/46/44/41/38/37/33	49/46/44/41/38/37/33
Dimension of Outline (WXHXD)	mm	896X159X320	896X159X320
Dimension of Carton Box (LXWXH)	mm	970X400X240	970X400X240
Dimension of Package (LXWXH)	mm	973X403X255	973X403X255
Net Weight	kg	11.5	11.5
Gross Weight	kg	14.5	14.5
Liquid pipe	mm	Φ6	Φ6
Gas Pipe(to indoor unit)	mm	Φ9.52	Φ9.52

The above data is subject to change without notice. Please refer to the nameplate of the unit.

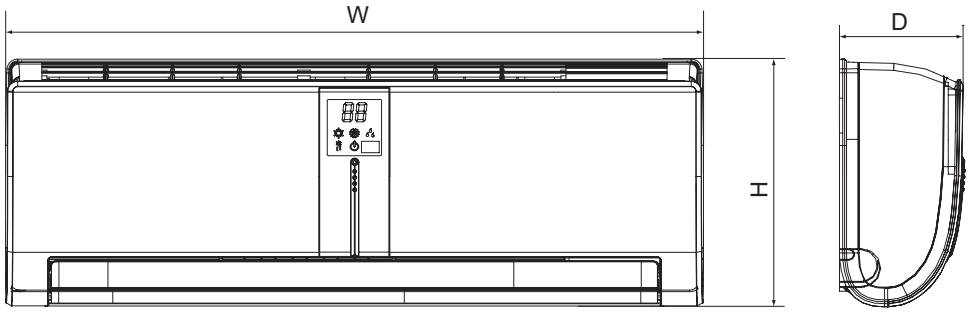
Model		GWH(18)UC-K3DNA1A/I	GWH(18)UC-K3DNA1A/I (Cold Plasma)
Product Code		CB204N02100	CB204N02101
Rated Voltage	V	220-240	220-240
Rated Frequency	Hz	50	50
Phases		1	1
Min/Max Voltage	V	198/264	198/264
Cooling Capacity	KW	5.3	5.3
Heating Capacity	KW	5.8	5.8
Air flow volume(max~min)	m^3/h	850/800/750/680/600/550/450	850/800/750/680/600/550/450
Dehumidifying Volume	L/h	1.8	1.8
Fan Type		Cross-flow	Cross-flow
Fan Diameter-height	mm	Φ98X765	Φ98X765
Cooling Fan Motor Speed(max~min)	rpm	1400/1150/1070/1000/950/900/850	1400/1150/1070/1000/950/900/850
Heating Fan Motor Speed(max~min)	rpm	1400/1150/1080 /1020/950/900/850	1400/1150/1080 /1020/950/900/850
Fan Motor Power Output	W	25	25
Fan motor Running Current	A	0.31	0.31
Fan Motor Capacitor	μF	2.5	2.5
Evaporator Material		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
Evaporator Pipe Diameter	mm	Φ7	Φ7
Evaporator Number of Rows-Fin Pitch	mm	2-1.5	2-1.5
Evaporator Length(L) X Height(H) X Width(W)	mm	770X343X25.4	770X343X25.4
Fuse Current	A	3.15	3.15
Sound Pressure Level (max~min)	dB(A)	44/40/37/35/33/31/28	44/40/37/35/33/31/28
Sound Power Level (max~min)	dB(A)	54/50/47/45/43/41/38	54/50/47/45/43/41/38
Dimension of Outline (WXHXD)	mm	998X178X340	998X178X340
Dimension of Carton Box (LXWXH)	mm	1080X425X268	1080X425X268
Dimension of Package (LXWXH)	mm	1083X428X283	1083X428X283
Net Weight	kg	15	15
Gross Weight	kg	19	19
Liquid pipe	mm	Φ6	Φ6
Gas Pipe(to indoor unit)	mm	Φ12	Φ12

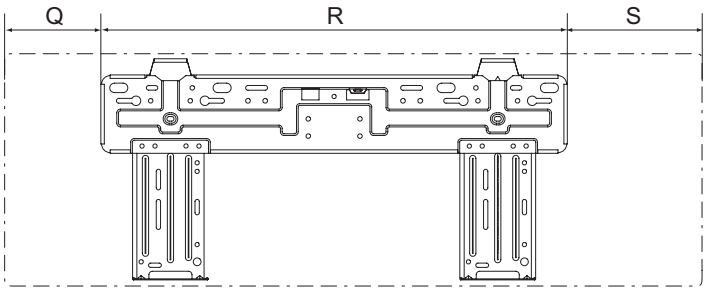
The above data is subject to change without notice. Please refer to the nameplate of the unit.

2.2 Noise Criteria Curve Tables for both Models

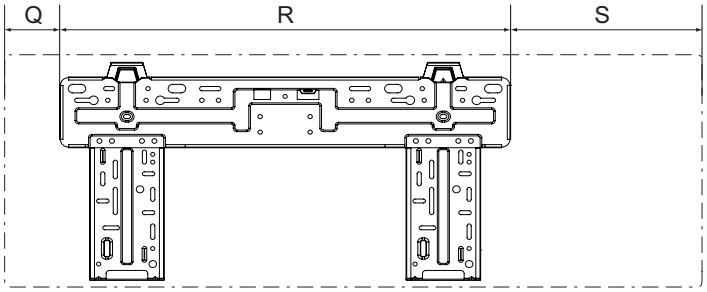


3. Construction Views

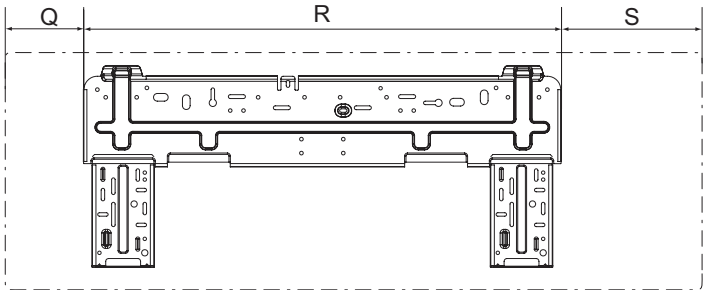




07K & 09K



12K

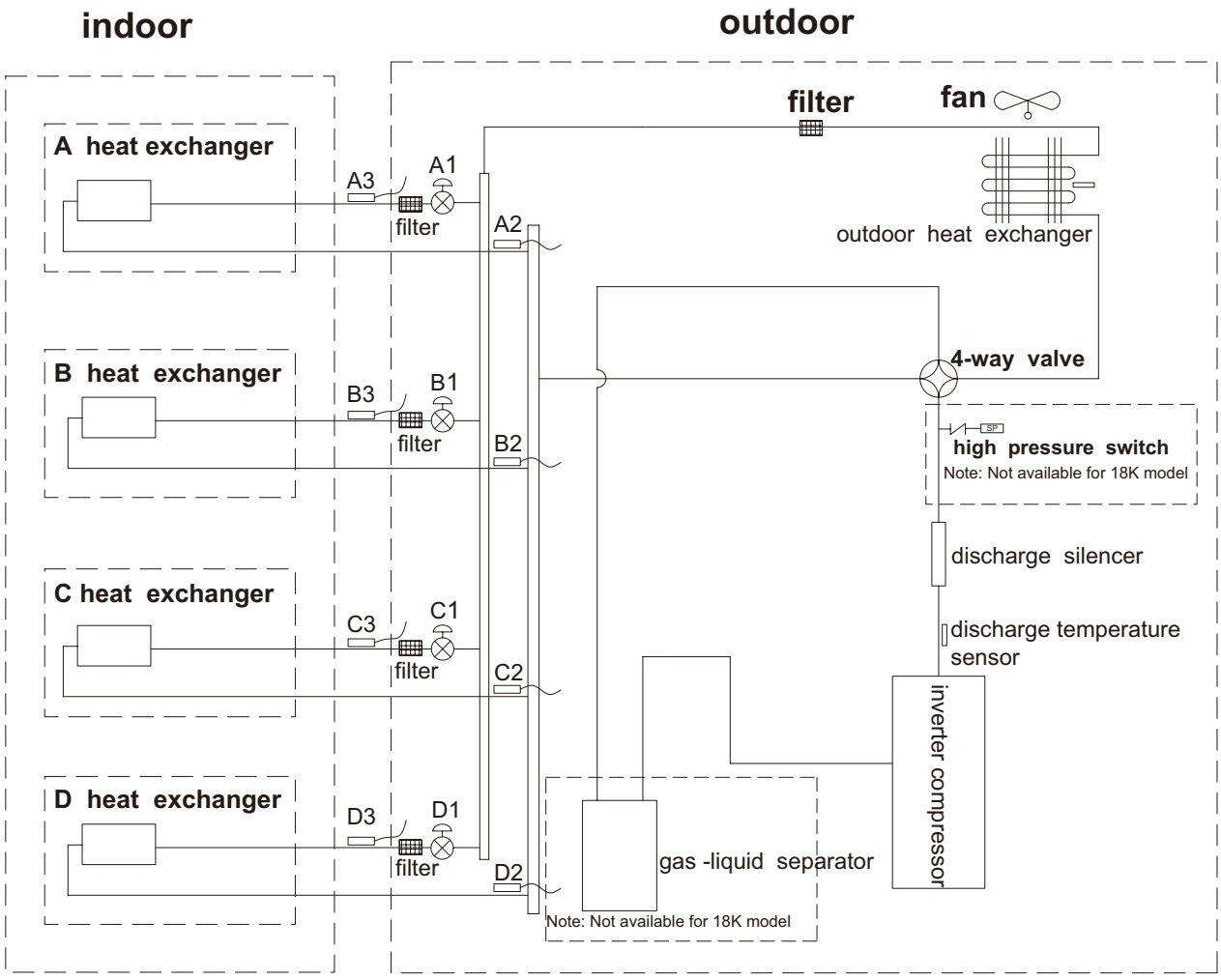


18K

Model	W	H	D	Q	R	S
07K & 09K	860	299	153	118	542	200
12K	896	320	159	64	542	290
18K	998	340	178	112	685	201

Unit: mm

4. Refrigerant System Diagram

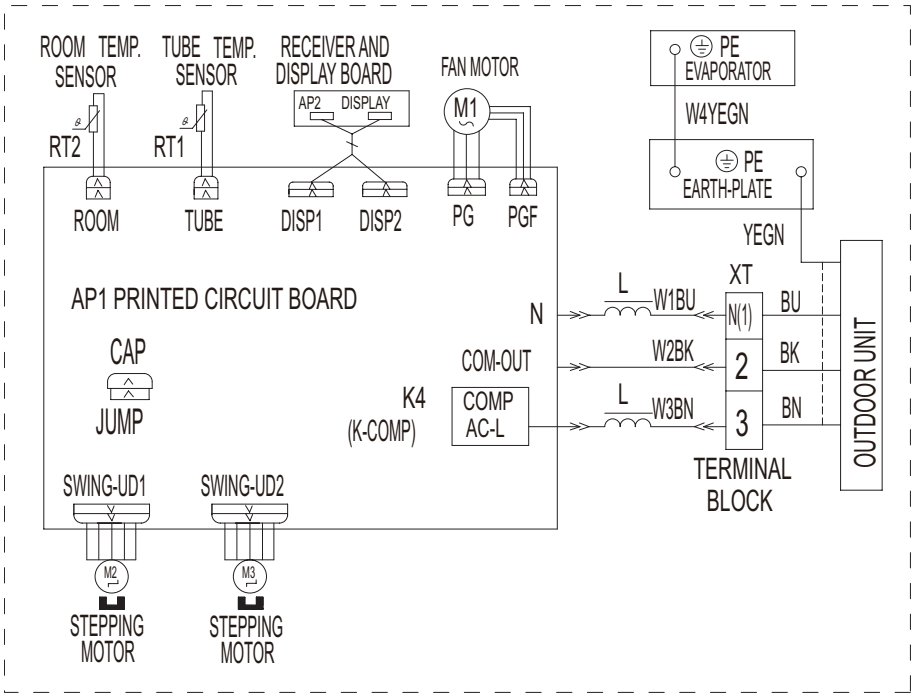


A1:A-unit electronic expansion valve B1:B-unit electronic expansion valve
C1:C-unit electronic expansion valve D1:D-unit electronic expansion valve
A2:A-unit gas pipe temperature sensor B2:B-unit gas pipe temperature sensor
C2:C-unit gas pipe temperature sensor D2:D-unit gas pipe temperature sensor
A3:A-unit liquid pipe temperature sensor B3:B-unit liquid pipe temperature sensor
C3:C-unit liquid pipe temperature sensor D3:D-unit liquid pipe temperature sensor

5. Schematic Diagram

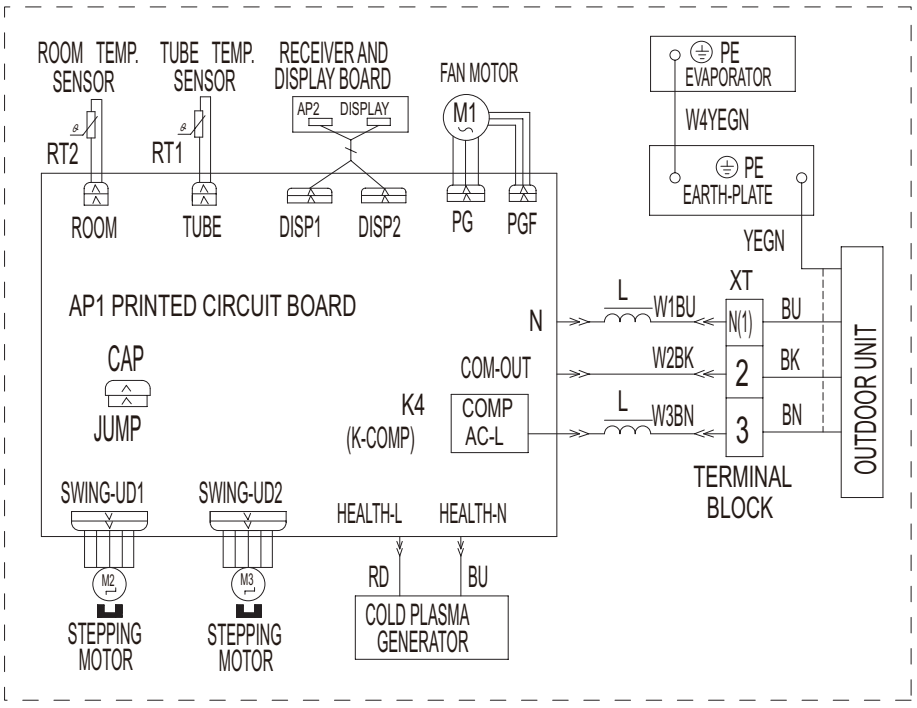
5.1 Electrical Wiring

GWH(07)UA-K3DNA1A/I(CB204N01800) GWH(09)UA-K3DNA1A/I(CB204N01900)
GWH(12)UB-K3DNA1A/I(CB204N02000) GWH(18)UC-K3DNA1A/I(CB204N02100)



Symbol	Color symbol
OG	ORANGE
VT	VIOLET
WH	WHITE
YE	YELLOW
RD	RED
YEGN	YELLOW GREEN
SAT	OVERLOAD
BN	BROWN
BU	BLUE
BK	BLACK
Symbol	Parts name
⏚	PROTECTIVE EARTH
COMP	COMPRESSOR

GWH(07)UA-K3DNA1A/I(CB204N01801) GWH(09)UA-K3DNA1A/I(CB204N01901)
GWH(12)UB-K3DNA1A/I(CB204N02001) GWH(18)UC-K3DNA1A/I(CB204N02101)

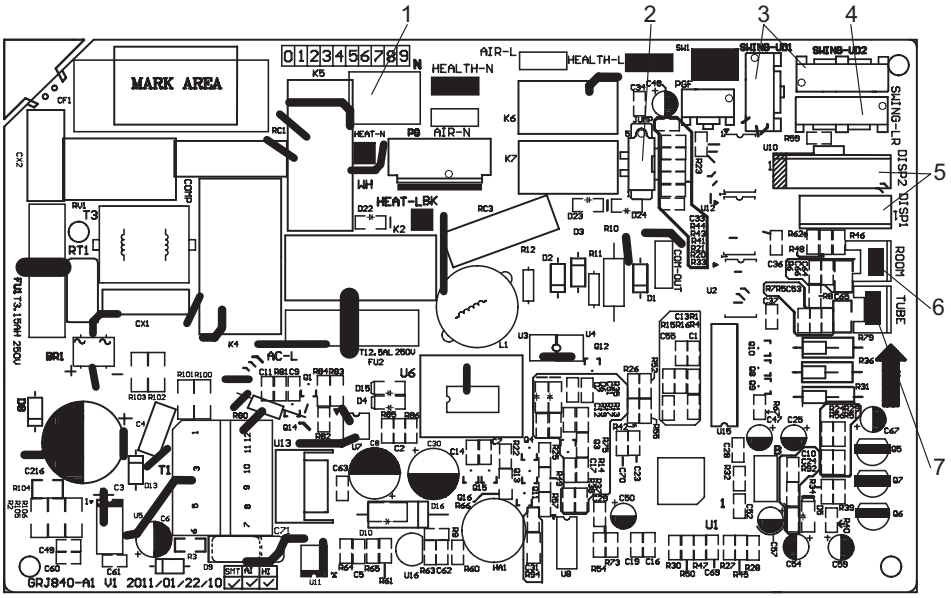


These circuit diagrams are subject to change without notice. Please refer to the one supplied with the unit.

5.2 Printed Circuit Board

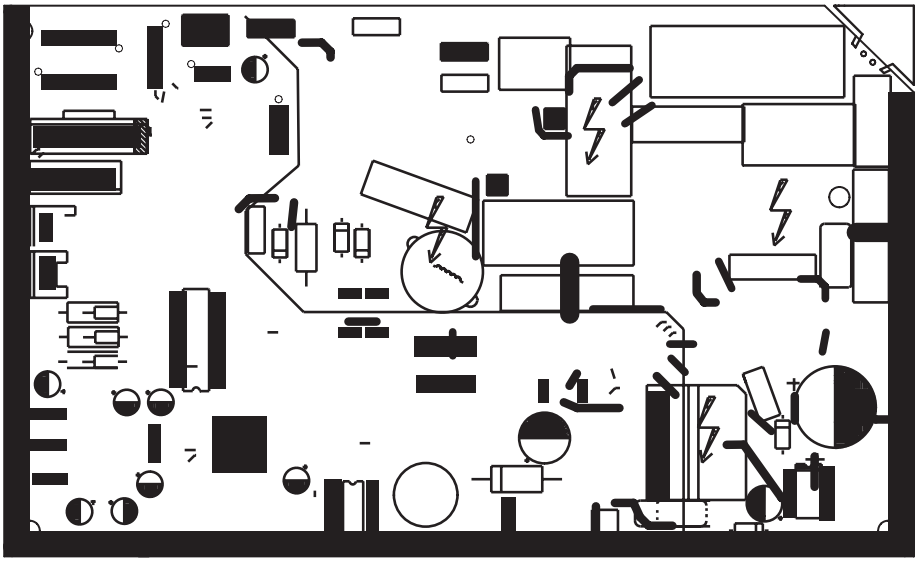
GWH(07)UA-K3DNA1A/I GWH(09)UA-K3DNA1A/I GWH(12)UB-K3DNA1A/I

● TOP VIEW



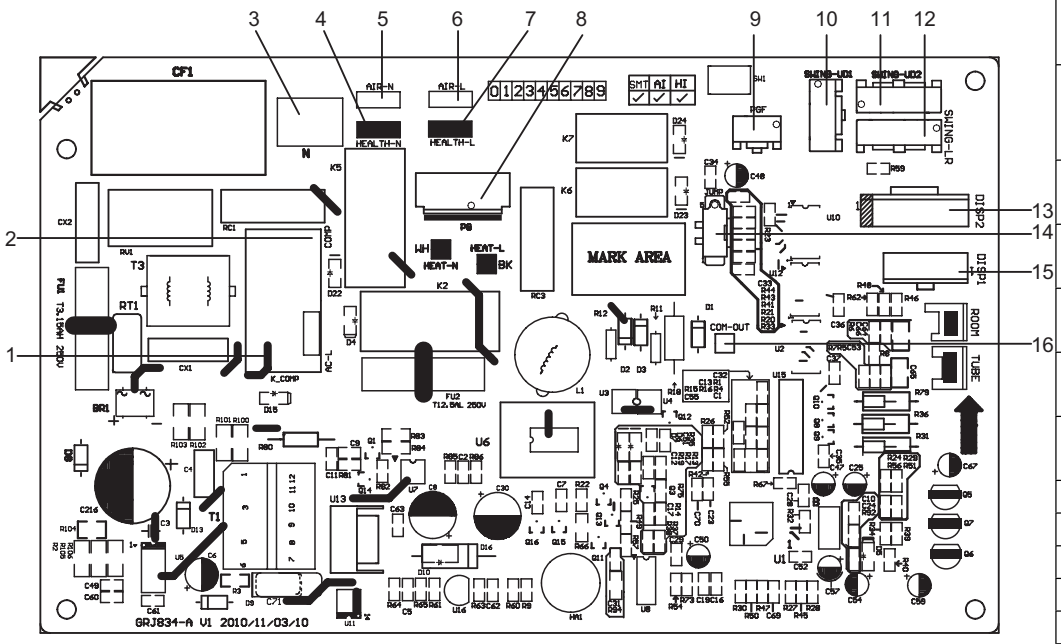
1	Neutralwire of power cord
2	Jumper cap
3	Interface of vertical swing
4	Interface of horizontal swing
5	Interface of display panel
6	Interface of pipe temp sensor
7	Interface of ambient temp sensor

● BOTTOM VIEW



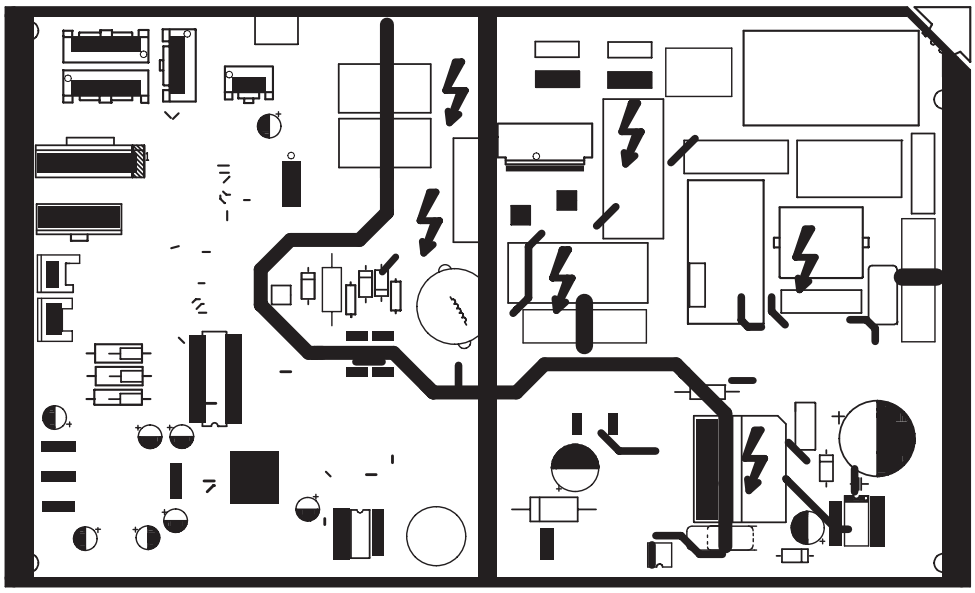
GWH(18)UC-K3DNA1A/I

● **TOP VIEW**



1	Wiring terminal of live wire of power supply, connecting to live wire of power cord
2	Wiring terminal of live wire of power supply, connecting to live wire of outdoor unit
3	Wiring terminal of live wire of power supply
4	Neutral wire terminal of cold plasma
5	Neutral wire terminal for air change
6	Live wire terminal for air change
7	Live wire terminal of cold plasma
8	Wiring terminal of PG motor
9	Feedback terminal of PG motor
10	Terminal 1 for vertical swing
11	Terminal 2 for vertical swing
12	Terminal for horizontal swing
13	7-pin wiring terminal of display
14	Terminal of jumper cap
15	6-pin wiring terminal of display
16	Wiring terminal of communication wire

● **BOTTOM VIEW**



6. Function and Control

6.1 Remote Control Operations

1 ON/OFF
Press it to start or stop operation.

2 -

Press it to decrease temperature setting.

3 +

Press it to increase temperature setting.

4 MODE

Press it to select operation mode(AUTO/COOL/DRY/FAN/HEAT).

5 FAN
Press it to set fan speed.

6 SWING
Press it set swing angle.

7 I FEEL

8 /

Press it to set HEALTH or AIR function.

9 SLEEP

10 TEMP

11 QUIET
Pressitto set QUIET function.

12 CLOCK
Press it set clock.

13 T-ON/T-OFF
Press it to set auto-off/auto-on timer.

14 TURBO

15 LIGHT
Press it to turn on/off the light.

16 X-FAN

1 ON/OFF

Press this button to turn on the unit .Press this button again to turn off the unit.

2 -

Press this button to decrease set temperature. Holding it down above 2 seconds rapidly decreases set temperature. In AUTO mode, set temperature is not adjustable.

3 +

Press this button to increase set temperature.Holding it down above 2 seconds rapidly increases set temperature. In AUTO mode, set temperature is not adjustable.

4 MODE

Each time you press this button,a mode is selected in a sequence that goes from AUTO, COOL,DRY, FAN,and HEAT *, as the following:

AUTO▶ COOL ▶ DRY ▶ FAN ▶HEAT*

*Note:Only for models with heating function.

After energization, AUTO mode is defaulted. In AUTO mode, the set temperature will not be displayed on the LCD, and the unit will automatically select the suitable operation mode in accordance with the room temperature to make indoor room comfortable.

5 FAN

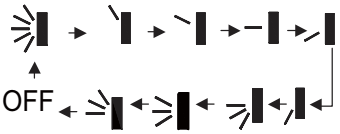
This button is used for setting Fan Speed in the sequence that goes from AUTO, , , , , , to then back to Auto.

Low speed Low-Medium speed Medium speed

Medium-High speed High speed

6 SWING

Press this button to set up &down swing angle, which circularly changes as below:



This remote controller is universal . If any command , or is sent out,the unit will carry out the command as indicates the guide louver swings as:

7 I FEEL

Press this button to turn on I FEEL function. The unit automatically adjust temperature according to the sensed temperature. Press this button again to cancel I FEEL function.

8 /

Press this button to achieve the on and off of healthy and scavenging functions in operation status.Press this button for the first time to start scavenging function; LCD displays“ ”. Press the button for the second time to start healthy and scavenging functions simultaneously; LCD displays“ ” and “ ” . Press this button for the third time to quit healthy and scavenging functions simultaneously. Press the button for the fourth time to start healthy function; LCD display “ ”. Press this button again to repeat the operation above.

9 SLEEP

- ●Press this button, can select Sleep 1 ( ), Sleep 2 ( ),Sleep 3 ( ) and cancel the Sleep,circulate between these, after electrified, Sleep Cancel is defaulted.
- ●Sleep 1 is Sleep mode 1, in Cool, Dehumidify modes: sleep status after run for one hour, the main unit setting temperature will increase 1 ℃,setting temperature increased 2℃, the unit will run at this setting temperature; In Heat mode: sleep status after run for one hour, the setting temperature will decrease 1 ℃, 2 hours, setting temperature will decrease 2 ℃, then the unit will run at this setting temperature.
- ●Sleep 2 is sleep mode 2, that is air conditioner will run according to the presetting a group of sleep temperature curve.
- ●Sleep 3- the sleep curve setting under Sleep mode by DIY:

(1) Under Sleep 3 mode, press "Turbo" button for a long time, remote control enters into user individuation sleep setting status, at this time, the time of remote control will display "1hour ", the setting temperature "88" will display the corresponding temperature of last setting sleep curve and blink (The first entering will display according to the initial curve setting value of original factory);

(2) Adjust "+" and "-" button, could change the corresponding setting temperature, after adjusted, press "Trubo "button for confirmation;

(3) At this time, 1hour will be automatically increased at the timer postion on the remote control, (that are "2hours " or "3hours " or "8hours "), the place of setting temperature "88" will display the corresponding temperature of last setting sleep curve and blink;

(4) Repeat the above step (2) ～ (3) operation, until 8hours temperature setting finished, sleep,curve setting finished, at this time, the remote control will resume the original timer display;temperature display will resume to original setting temperature.

- ●Sleep3- the sleep curve setting under Sleep mode by DIY could be inquired:

The user could accord to sleep curve setting method to inquire the presetting sleep curve, enter into user individuation sleep setting status, but do not change the temperature, press "Turbo" button directly for confirmation.Note: In the above presetting or enquiry procedure, if continuously within10s, there is no button pressed, the sleep curve setting within 10s, there is no button pressed, the sleep curve setting status will be automatically quit and resume to display the original displaying. In the presetting or enquiry procedure, press "ON/OFF" button, "Mode" button, "Timer"button or "Sleep" button, the sleep curve setting or enquiry status will quit similarly.

10 TEMP

Press this button, could select displaying the indoor setting temperature or indoor ambient temperature.When the indoor unit firstly power on it will display the setting temperature, if the temperature's displaying status is changed from other status to" ",displays the ambient temperature, 5s later or within 5s, it receives other remote control signal that will return to display the setting temperature. if the users haven't set up the temperature displaying status,that will display the setting temperature.

11 QUIET

Press this button, the Quiet status is under the Auto Quiet mode (display "AUTO"signal)and Quiet mode (display " " singal) and Quiet OFF (there is no signal of " " displayed),after powered on, the Quiet OFF is defaulted. Note: the Quiet function cannot be set up in Fan and Dry mode;Under the Quiet mode (Display " " Under the Quiet mode (Display " " signal), the fan speed is not available.

12 CLOCK

Press CLOCK button, blinking . Within 5 seconds,pressing +or - button adjusts the present time.Holding down either button above 2 seconds increases or decreases the time by 1 minute every 0.5 second and then by 10 minutes every 0.5 second. During blinking after setting, press CLOCK button again to confirm the setting,and then will be constantly displayed.

13 T-ON/T-OFF

Press T-ON button to initiate the auto-ON timer. To cancel the auto-timer program, simply press this button again.
After press of this button, disappears and "ON "blink s .00:00 is displayed for ON time setting. Within 5 seconds, press + or - button to adjust the time value. Every press of either button changes the time setting by 1 minute. Holding down either button rapidly changes the time setting by 1 minute and then 10 minutes. Within 5 Seconds after setting, press TIMER ON button to confirm. Press T-OFF button to initiate the auto-off timer. To cancel the auto-timer program, simply press the button again.TIMER OFF setting is the same as TIMER ON.

14 TURBO

Press this button to activate / deactivate the Turbo function which enables the unit to reach the preset temperature in the shortest time. In COOL mode, the unit will blow strong cooling air at super high fan speed. In HEAT mode, the unit will blow strong heating air at super high fan speed.

15 LIGHT

Press LIGHT button to turn on the display's light and press this button again to turn off the display 's light. If the light is turned on , is displayed. If the light is turned off, disappears.

16 X-FAN

Pressing X-FAN button in COOL or DRY mode,the icon is displayed and the indoor fan will continue operation for 10 minutes in order to dry the indoor unit even though you have turned off the unit.
After energization, X-FAN OFF is defaulted. X-FAN is not available in AUTO,FAN or HEAT mode.

17 Combination of "+" and "-" buttons: About lock
Press "+ " and "-" buttons simultaneously to lock or unlock the keypad. If the remote controller is locked, is displayed. In this case, pressing any button, blinks three times.

18 Combination of "MODE " and "-" buttons : About switch between Fahrenheit and centigrade At unit OFF, press "MODE" and " - " buttons simultaneously to switch between ℃ and ℉ .

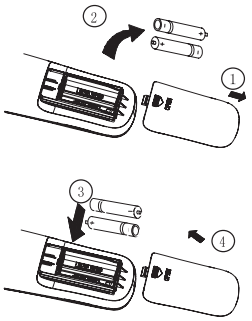
19 Combination of " TEMP " and "CLOCK" buttons : About Energy-saving Function
Press “TEMP” and “CLOCK” simultaneously in COOL mode to start energy-saving function. Nixie tube on the remote controller displays “SE”. Repeat the operation to quit the function.

20 Combination of " TEMP " and "CLOCK" buttons : About 8℃ Heating Function
Press “TEMP” and “CLOCK” simultaneously in HEAT mode to start 8℃ Heating Function Nixie tube on the remote controller displays “ ” and a selected temperature of “ 8℃”. (46 ℉ if Fahrenheit is adopted). Repeat the operation to quit the function.

21 About Back-lighting Function
The unit lights for 4s when energizing for the first time, and 3s for later press.

Replacement of Batteries

1.Remove the battery cover plate from the rear of the remote controller.
(As shown in the figure)
2.Take out the old batteries.
3.Insert two new AAA1.5V dry batteries, and pay attention to the polarity.
4. Reinstall the battery cover plate.
★Notes:
●When replacing the batteries, do not use old or different types of batteries,
●If the remote controller will not be used for a long time, please
otherwise, it may cause malfunction.
remove batteries to prevent batteries from leaking.
●The operation should be performed in its receiving range.
●It should be kept 1m away from the TV set or stereo sound sets.
●If the remote controller does not operate normally, please take the
batteries out and reinsert them after 30 seconds.If it still can't operate properly,
replace the batteries.



Sketch map for
replacing batteries

6.2 Description of each Control Operation

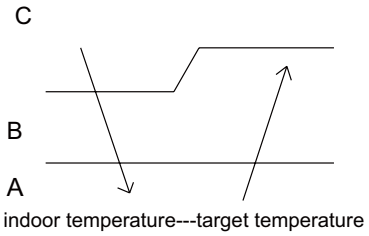
I. Basic Operation Mode

1. Cool; 2.Dry; 3.Heat; 4.Auto; 5.Fan

II. Basic Functions

1.Cooling Only

(1) Under this mode, fan and swing run at preset status, the temperature setting range is 16-30℃ .



(2) Under malfunction for outdoor unit and protection stop, the indoor unit runs with the original status, and display malfunction.

(3) The indoor fan stops when the modes conflict with each other.

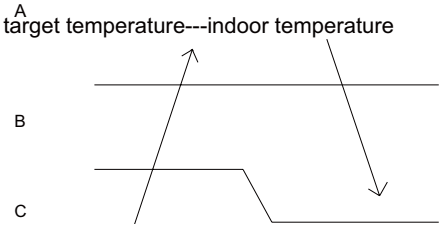
2. Dry Mode

(1) Under this mode, the indoor fan runs with low speed, and swing runs at preset status, the temperature setting range is 16-30℃ .

(2) Under malfunction for outdoor unit and protection stop, the indoor unit runs with the original status, and display malfunction.

3. Heating Mode

(1) Under this mode, the temperature setting range is 16-30℃ .



(2) Working condition and Process of Heating

When the unit is ON and in heating mode, indoor fan starts cold air prevention operation; when the unit is off and the indoor fan runned before, it blows residual heat.

(3) Protection Function. The compressor stops as the malfunction (including any temperature sensor malfunction) in heating mode, the indoor fan runs with blowing residual heat.

(4) Defrosting and Oil Return

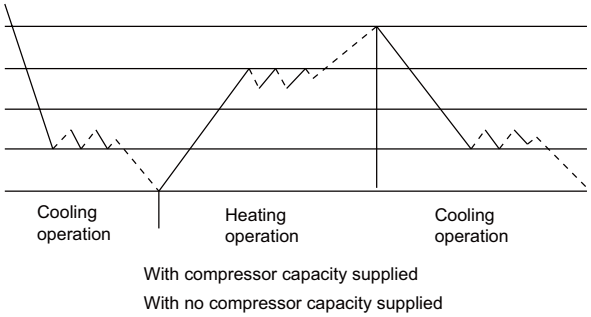
Once defrosting signal of outdoor unit is received, H1 will be displayed.

4. Working Methods of Auto Mode

1) When Tamb.≥26℃ (79 ℉), it operates in Cool mode.

2) For heat pump unit, when Tamb.≤22℃ , it operates in Heat mode.

3) When 22℃ < Tamb.< 26℃ , it operates in auto fan mode upon initial startup of the unit. When changing to auto mode from other modes, it will keep the previous operation mode (when it enter Dry mode, it operates in auto fan mode.).



5. Fan Mode

Only indoor fan operates in Fan mode. Under auto fan speed, it runs in cooling auto fan mode.

III. Other Control

1. Buzzer

The buzzer will give out a beep when the controller is energized, receiving signal from remote controller and auto button.

2. Auto Button

Press this button once, it will operate in Auto mode, and indoor fan operates in Auto fan mode and swing. When the unit is on, pressing this button will turn off the unit.

3. Auto Fan

a. Auto fan speed in Heat mode When Tamb.≤Tpreset - 2℃ , the indoor fan operates at high speed;

When Tpreset - 2℃ <Tamb.<Tpreset, the indoor fan operates at middle speed; When Tamb≥Tpreset， the indoor fan operates at low speed.

b. Auto fan speed in CooL and Fan mode

When Tamb≥Tpreset+2℃， the indoor fan operates at high speed;

When Tpreset<Tamb.<Tpreset+2℃ , the indoor fan operates at middle speed; When Tamb.≤Tpreset, the indoor fan operates at low speed.

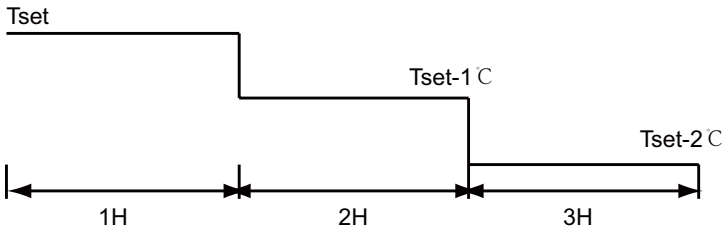
c. The auto fan speed is at low speed in Dry mode.

Note: Under auto fan speed, it will shift between high speed and middle speed, middle speed and low speed, high speed and low speed, the operation time must be 3.5min at least.

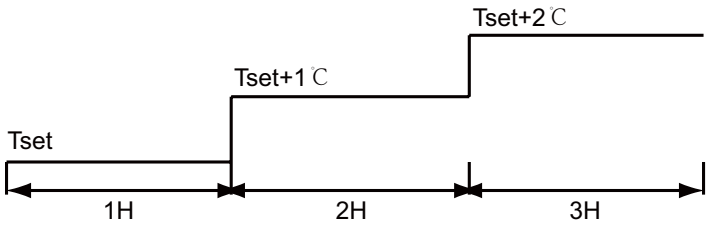
4. Sleep

4.1 The unit will select suitable sleep curve according to set temperature.

4.2 Sleep curve in Heat mode



4.3 Sleep curve in Cool mode



5. Timer Function

(1) General Timer:

1.1 Time On: if Timer On is set when the system is,the controller will operate in the original setting mode after reaching the timer on time. The timer interval is 0.5h, and the setting range is 0.5-24h.

1.2 Timer Off: Timer Off can be set when the unit is on. The unit will be off when timer off time is reahced. The timer interval is 0.5h, and the setting range is 0.5-24h.

(2) Clock Timer:

2.1 Timer On: If Timer On is set when the system runs, it will continue to run; if Timer On is set when the system is off, the system will start to run in the original setting mode when timer on time is reached.

2.2 Timer Off: If timer off is set when the system is off, the system keeps stand-by status; if timer off is set when the system is on, the system stops when reaching timer off time.

2.3 Timer Change:Timer On and Timer OFF can be set via remote ON/OFF button. Timer time can be reset and the system will operate according to the latest setting.

When the unit is on and Timer On and Timer Off are both set, the system will operate according to the set state. When the timer off time is reached, the system will stop.

When the system stops, and Timer On and Timer Off are both set, the system will remain stop until timer on time is reached. After that, the unit will operate according to the set mode everyday when the timer on time is reached. When the timer off time is reached, the system will stop. If timer on time is the same as timer off time, the system will stop.

6. Memory Function

Memory contents: mode, up& down swing, light, set temperature, set fan speed, general timer (but clock timer). After power failure, if the unit is reenergized, it will operate according to memory contents. If Timer function is not set in the last remote control, the system will operate according to the last remote control.

If general timer function is set in the last remote control and power failure occurs before timer time is reached, the unit will operate

according to the timer function set in the last remote control. Timer time is calculated after the unit is re-energized.
If general timer function is set in the last remote control and power failure occurs after timer time is reached, the system will operate according to the memory content before power failure. Timer operation is not memorized.

7. Health Function

When the unit is on and the indoor fan operates, press Health button to start this function (if there is no Health button, health operation is defaulted). When indoor fan stops or turning of health function by remote controller, health function will be off.

8. I Feel Function

When the controller receives I Feel order, the controller will operate according to the ambient temperature. The remote controller will send ambient temperature to the controller every 10min. If the controller does not receive the ambient temperature sent by remote controller for 11min, the air conditioner will operate according the ambient temperature around it. If I Feel function is not set, the air conditioner will operate according the ambient temperature around it. This function is not memorized upon power r failure.

9. Reserved Fahrenheit Temperature

The nixie tube will display the set temperature in Celsius temperature or Fahrenheit Temperature according to the order. Setting range is 16~30℃ (61~86 ℉). In Auto mode, it will display 25℃ (77 ℉) during cooling and fan operation, and display 20℃ (68 ℉) during heating operation. For cooling only unit, it displays 25℃ (77 ℉).
The indoor temperature displayed is sent by remote controller, ranging from 0~60℃ (32~99 ℉). If outdoor ambient temperature is received, the display remains the same. If valid control signal is received, it will display set temperature for 5s and then resume displaying ambient temperature.
For units with memory function, set temperature will be displayed after re-energizing the unit.

10. Cold Plasma Function

Turning on the cold plasma function with remote controller when the fan operates, this function will act.
Turning off the cold plasma function with remote controller or turning off the fan, this function will end.

11. Turbo Function

When Turbo command is received by controller, indoor fan will operate at high speed while outdoor unit will operate at high frequency in cooling or heating mode.

12. Defrosting Mode Switch

If there is no H1 displayed, turn on the unit with remote controller and enter “Defrosting mode 1”. When the indoor unit receives remote control signal, it will send the signal to the outdoor unit.
If there is H1 displayed, turn on the unit with remote controller and enter “Defrosting mode 2”. When the indoor unit receives remote control signal, it will send the signal to the outdoor unit.
Press mode and auxiliary heating button to switch between “Defrosting mode 1” and “Defrosting mode 2”.

13. Forcible Defrosting Function

When the unit is in Heat mode and set temperature is 16℃ , press “+, -, +, -, +, -,” successively for 5s, and the indoor unit will enter forcible defrosting setting and send the signal to the outdoor unit.
When the indoor unit receives forcible defrosting signal from the outdoor unit, it will exit forcible defrosting setting.

14. Refrigerant Recovery Function

Enter refrigerant recovery mode: turn on the unit within 5 min after energization and at 16℃ cooling mode. Press remote controller light off button successively for 3 times within 3s and the unit will enter refrigerant recovery mode, displaying Fo. The signal will be sent to the outdoor unit.
Exit refrigerant recovery mode: during refrigerant recovery, if any signal from remote controller is received or refrigerant recovery lasts for 25min, it will exit this mode.
Action of entering refrigerant recovery mode: the indoor fan will operate in Cool mode. The fan speed is high and set temperature is 16℃ . The horizontal louver will be at the smallest angle.
Action of exit refrigerant recovery mode: the indoor fan will operate according to the last remote control setting.

15. Pre-operation Function

When Cool mode at 30℃ is set, press “-, +, -, +, -, +” successively for 3s, it will enter pre-operation mode. The signal will be sent to the outdoor unit.
Pre-operation mode: it performs cooling operation (indoor fan does not operate) and display “dd”.
After exiting pre-operation mode, the indoor unit will stop displaying “dd”. If the signal of “wrong wire connection or expansion valve malfunction” is received, “dn” will be displayed.

16. Mode Conflict

When the mode of started unit is different from that of operating unit, the indoor unit will display mode conflict code “E7”. The mode sent to the outdoor unit remains the one received by the remote controller.

7. Installation Manual

7.1 Notices for Installation

! Caution

1.The unit should be installed only by authorized service center according to local or government regulations and in compliance with this manual.
2.Before installing, please contact with local authorized maintenance center. If the unit is not installed by the authorized service center, the malfunction may not be solved due to inconvenient contact between the user and the service personnel.
3.When removing the unit to the other place, please firstly contact with the local authorized service center.
4.Warning: Before obtaining access to terminals, all supply circuits must be disconnected.
5.For appliances with type Y attachment, the instructions shall contain the substance of the following. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
6.The temperature of refrigerant line will be high; please keep the interconnection cable away from the copper tube.
7.The instructions shall state the substance of the following:
This appliance is not intended for use by persons(including children)with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

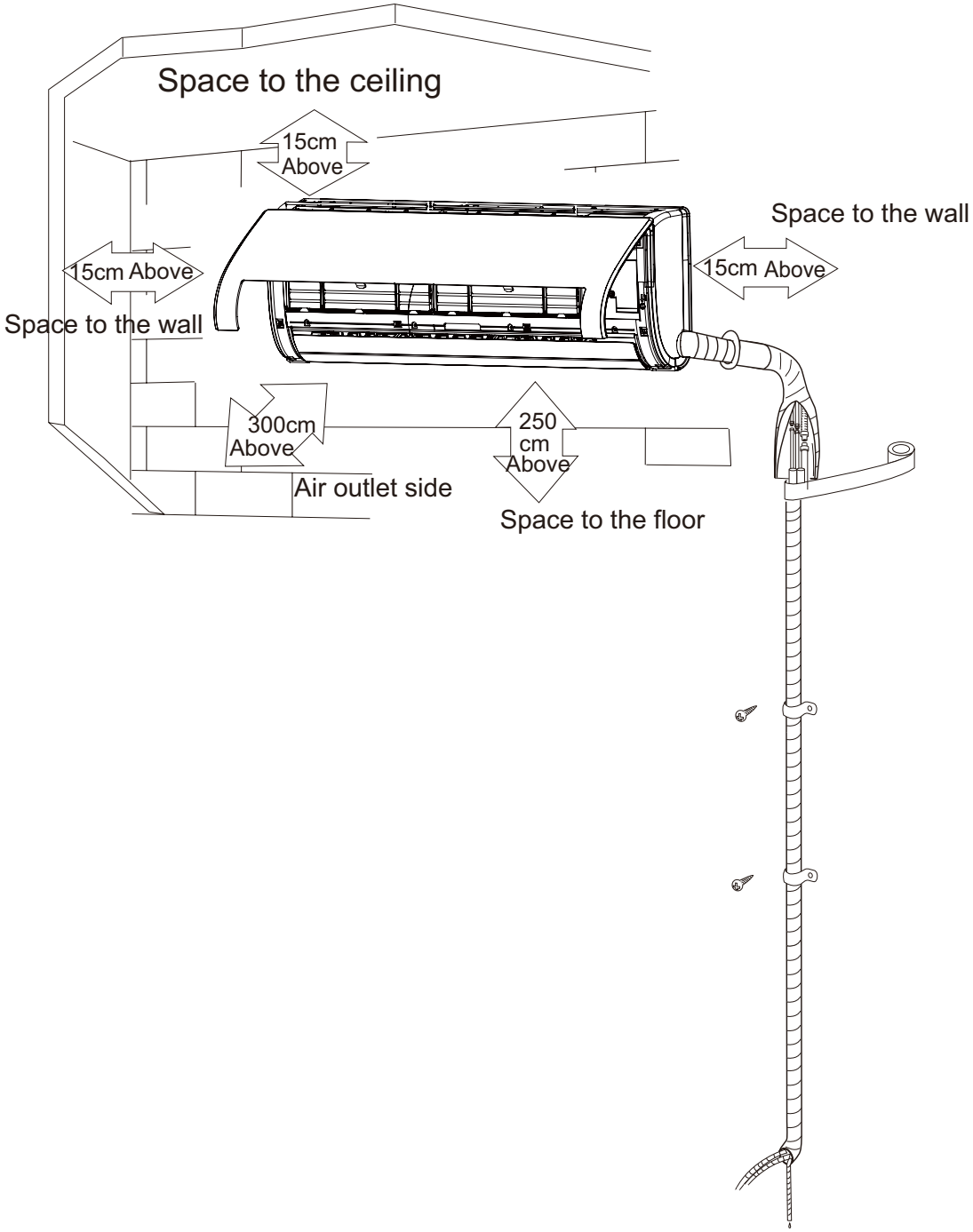
Installation Site Instructions

Proper installation site is vital for correct and efficient operation of the unit. Avoid the following sites where:
- strong heat sources, vapours, flammable gas or volatile liquids are emitted.
- high-frequency electro-magnetic waves are generated by radio equipment,welders and medical equipment.
- salt-laden air prevails (such as close to coastal areas).
- the air is contaminated with industrial vapours and oils.
- the air contains sulphures gas such as in hot spring zones.
- corrosion or poor air quality exists.

Installation Site of Indoor Unit

1. The air inlet and outlet should be away from the obstructions. Ensure the air can be blown through the whole room.
2. Select a site where the condensate can be easily drained out, and where it is easily connected to outdoor unit.
3. Select a place where it is out of reach of children.
4. Select a place where the wall is strong enough to withstand the full weight and vibration of the unit.
5. Be sure to leave enough space to allow access for routine maintenance. The installation site should be 250cm or more above the floor.
6. Select a place about 1m or more away from TV set or any other electric appliance.
7. Select a place where the filter can be easily taken out.
8. Make sure that the indoor unit is installed in accordance with installation dimension instructions.
9. Do not use the unit in the laundry or by swimming pool etc.

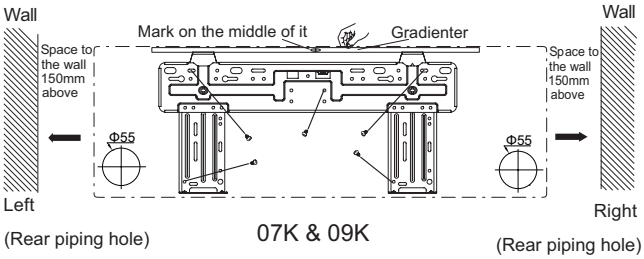
7.2 Installation Drawing

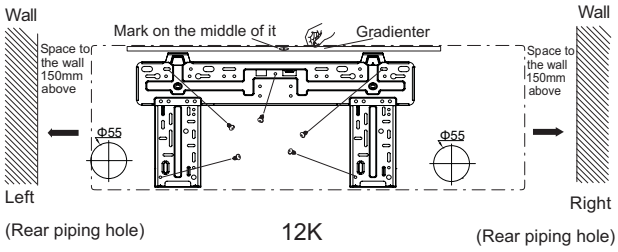


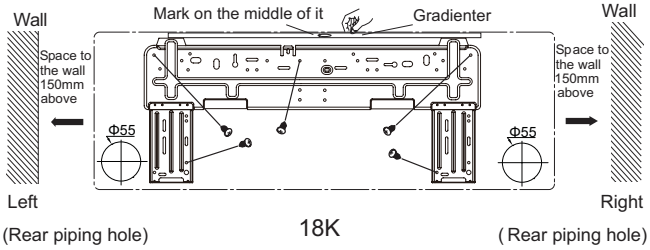
7.3 Install indoor unit

Install the rear panel

1. Mounting plate should be installed horizontally. As the water tray's outlet for the indoor unit is two-way type, during installation, the indoor unit should slightly slant to water tray's outlet for smooth drainage of condensate.
2.Fix the mounting plate on the wall with screws.
3.Be sure that the mounting plate has been fixed firmly enough to withstand about 60 kg. Meanwhile, the weight should be evenly shared by each screw.

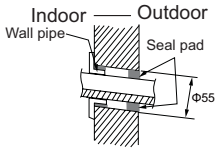






Install the piping hole

1.Slant the piping hole (Φ55) on the wall slightly downward to the outdoor side.
2.Insert the piping-hole sleeve into the hole to prevent the connection piping and wiring from being damaged when passing through the hole.

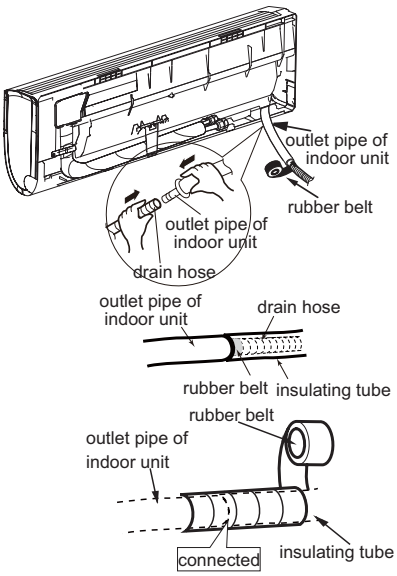


Install Drain Hose

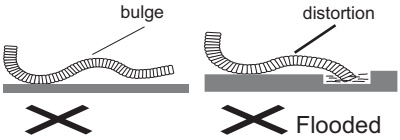
1.Connect the drain hose to the outlet pipe of the indoor unit. Bind the joint with rubber belt.

2.Put the drain hose into insulating tube.

3.Wrap the insulating tube with wide rubber belt to prevent the shift of insulating tube. Slant the drain hose downward slightly for smooth drainage of condensate.



Note: The insulating tube should be connected reliably with the sleeve outside the outlet pipe. The drain hose should be slanted downward slightly, without distortion, bulge or fluctuation. Do not put the outlet in the water.



Connecting Indoor and Outdoor Electric Wires

1.Open the front panel.
2.Remove the wiring cover,connect and fix power connection cord to the terminal board as shown in Fig 1.
3.Make the power connection cord pass through the hole at the back of indoor unit.
4.Reinstall the cord anchorage and wiring cover.
5.Reinstall the front panel.

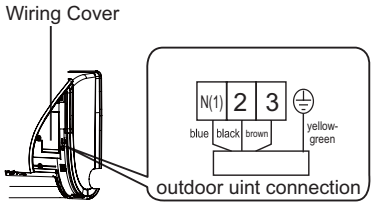


Fig 1

NOTE:

All wires between indoor and outdoor units must be connected by the qualified electric contractor.
- Electric wires must be connected correctly. Improper connection may cause malfunction.
- Tighten the terminal screws securely.
- After tightening the screws, pull the wire slightly to confirm whether it's firm or not.
- Make sure that the electric connections are earthed properly to prevent electric shock.
- Make sure that all wiring connections are secure and the cover plates are reinstalled properly. Poor installation may cause fire or electric shock.

Install the Indoor Unit

The piping can be output from right, right rear, left or left rear.
1. When routing the piping and wiring from the left or right side of indoor unit, cut off the tailings from the chassis when necessary(As shown in Fig.2)
(1)Cut off tailing 1 when routing the wiring only;
(2)Cut off tailing 1 and tailing 2 when routing both the wiring and piping.
2. Take out the piping from body case; wrap the piping, power cords, drain hose with the tape and then make them pass through the piping hole. (As shown in Fig.3)
3. Hang the mounting slots of the indoor unit on the upper hooks of the mounting plate and check if it is firm enough. (As shown in Fig.4)
4. The installation site should be 250cm or more above the floor.

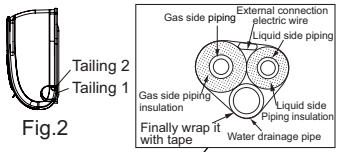


Fig.2

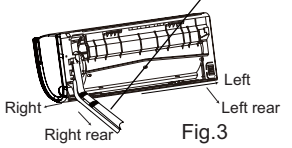


Fig.3

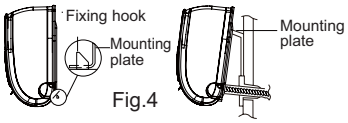
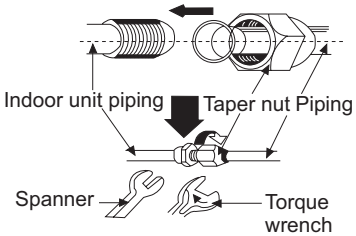


Fig.4

Install the connection pipe

1. Align the center of the pipe flare with the related valve.
2. Screw in the flare nut by hand and then tighten the nut with spanner and torque wrench by referring to the following:

Hex nut diameter	Tightening torque(N·m)
Φ6	15~20
Φ 9.52	31~35
Φ 12	50~55
Φ 16	60~65
Φ 19	70~75



NOTE: Connect the connection pipe to indoor unit at first and then to outdoor unit. Handle piping bending with care. Do not damage the connection pipe. Ensure that the joint nut is tightened firmly, otherwise, it may cause leakage.

7.4 Check after Installation and Test Operation

Check after installation

Items to be checked	Possible malfunction
Has it been fixed firmly?	The unit may drop, shake or emit noise.
Have you done the refrigerant leakage test?	It may cause insufficient cooling(heating) capacity.
Is heat insulation sufficient?	It may cause condensation and dripping.
Is water drainage well?	It may cause condensation and dripping.
Is the voltage in accordance with the rated voltage marked on the nameplate?	It may cause electric malfunction or damage the part.
Is the electric wiring and piping connection installed correctly and securely?	It may cause electric malfunction or damage the part.
Has the unit been connected to a secure earth connection?	It may cause electrical leakage.
Is the power cord specified?	It may cause electric malfunction or damage the part
Is the inlet and outlet been covered?	It may cause insufficient cooling(heating) capacity.
Has the length of connection pipes and refrigerant capacity been recorded?	The refrigerant capacity is not accurate.

Operation Test

1. Before Operation Test

(1)Do not switch on power before installation is finished completely.

(2)Electric wiring must be connected correctly and securely.

(3)Cut-off valves of the connection pipes should be opened.

(4)All the impurities such as scraps and thrums must be cleared from the unit.

2. Operation Test Method

(1)Switch on power and press "ON/OFF" button on the remote controller to start operation.

(2)Press MODE button to select the COOL, HEAT (Not available for cooling only unit), FAN to check whether the operation is normal or not.

7.5 Installation and Maintenance of Healthy Filter

Installation Instructions

1. Lift up the front panel from its two ends, as shown by the arrow direction, and then remove the air filter.(as shown in Fig.a)

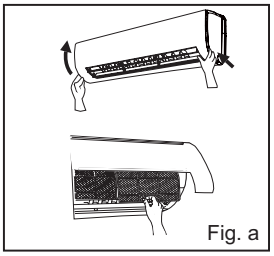


Fig. a

2. Attach the healthy filter onto the air filter,(as shown in Fig.b).

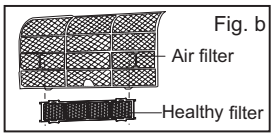


Fig. b

3. Install the air filter properly along the arrow direction in Fig.c, and then close the panel.

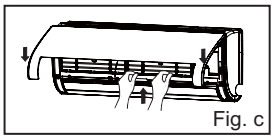


Fig. c

Cleaning and Maintenance

Remove the healthy filter and reinstall it after cleaning according to the installation instruction. Do not use brush or hard objects to clean the filter. After cleaning, be sure to dry it in the shade.

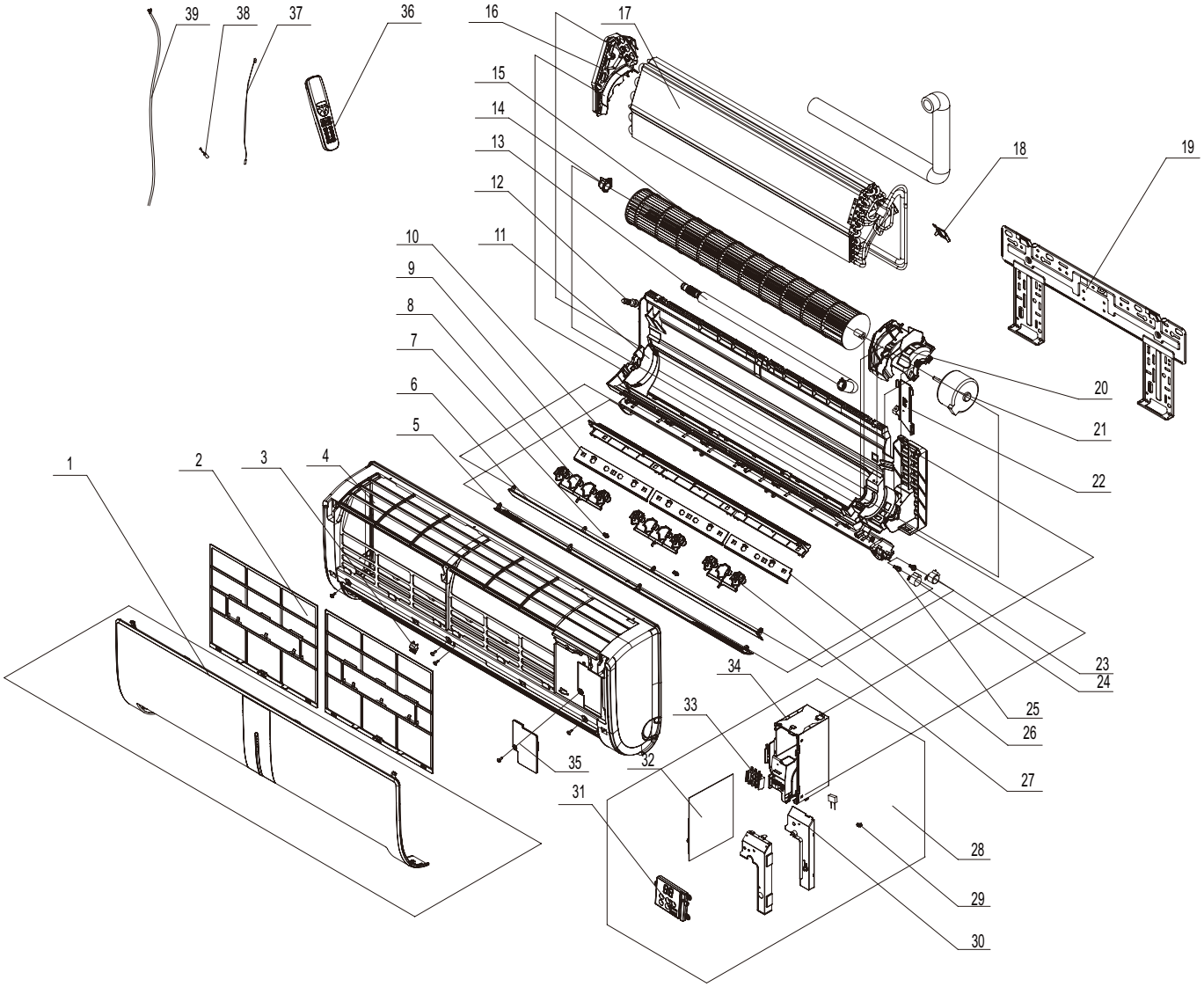
Service Life

The general service life for the healthy filter is about one year under normal condition. As for silver ion filter, it is ineffective when its surface becomes black (green).

This supplementary instruction is provided for reference to the unit with healthy filter. If the graphics provided herein are different from the actual product, please refer to the actual product. The quantity of healthy filters is based on the actual delivery.

8. Exploded Views and Parts List

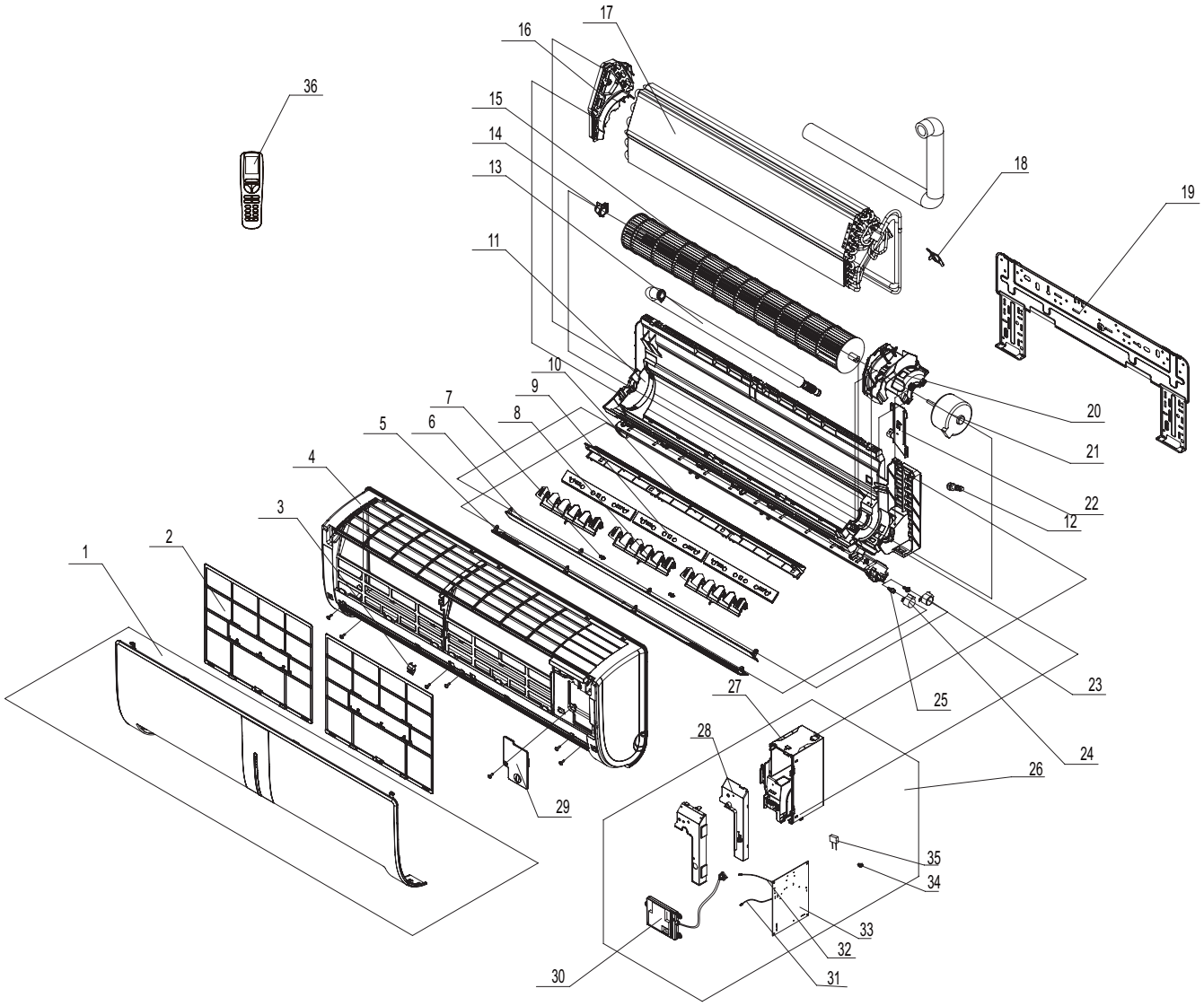
GWH(07)UA-K3DNA1A/I
GWH(09)UA-K3DNA1A/I



NO.	Description	Part Code		Qty
		GWH(07)UA-K3DNA1A/I	GWH(09)UA-K3DNA1A/I	
	Product Code	CB204N01800	CB204N01900	
1	Front Panel Assy	2001269506	2001269506	1
2	Filter Sub-Assy	11122122	11122122	2
3	Screw Cover	24252024	24252024	1
4	Front Case Sub-assy	2001269301	2001269301	1
5	Guide Louver 1	10512218	10512218	1
6	Guide Louver 2	10512219	10512219	1
7	Shaft of Guide Louver	1054202001	1054202001	6
8	Air Louver 1	10512438	10512438	1
9	Louver Clamp1	26112492	26112492	1
10	Helicoid Tongue	26112490	26112490	1
11	Rear Case assy	22202488	22202488	1
12	Rubber Plug (Water Tray)	76712012	76712012	1
13	Drainage Hose	0523001407	0523001407	1
14	Axile Bush Sub-assy	10542024	10542024	1
15	Cross Flow Fan	10352047	10352047	1
16	Evaporator Support	24212132	24212132	1
17	Evaporator Assy	0100263001	0100263001	1
18	Shield Board (Elbow)	01382010	01382010	1
19	Wall Mounting Frame	01252021	01252021	1
20	Motor Press Plate	26112270	26112270	1
21	Fan Motor	15012125	15012125	1
22	Pipe Clamp	26112164	26112164	1
23	Step Motor	1521212201	1521212201	1
24	Step Motor	1521210804	1521210804	1
25	Crank	73012005	73012005	2
26	Louver Clamp2	26112491	26112491	1
27	Air Louver 2	10512439	10512439	1
28	Electric Box Assy	20302654	20302654	1
29	Jumper	4202300102	4202300102	1
30	Electric Box Cover	2012213301	2012213301	1
31	Display Board	30565133	30565133	1
32	Main Board	301388701	301388701	1
33	Terminal Board	420111041	420111041	1
34	Electric Box	20112121	20112121	1
35	Electric Box Cover2	20122168	20122168	1
36	Remote Controller	30510134	30510134	1
37	Ambient Temperature Sensor	390000453	390000453	1
38	Temperature Sensor	390000592	390000592	1
39	Connecting Cable	400204056	400204056	0

The data above are subject to change without notice.

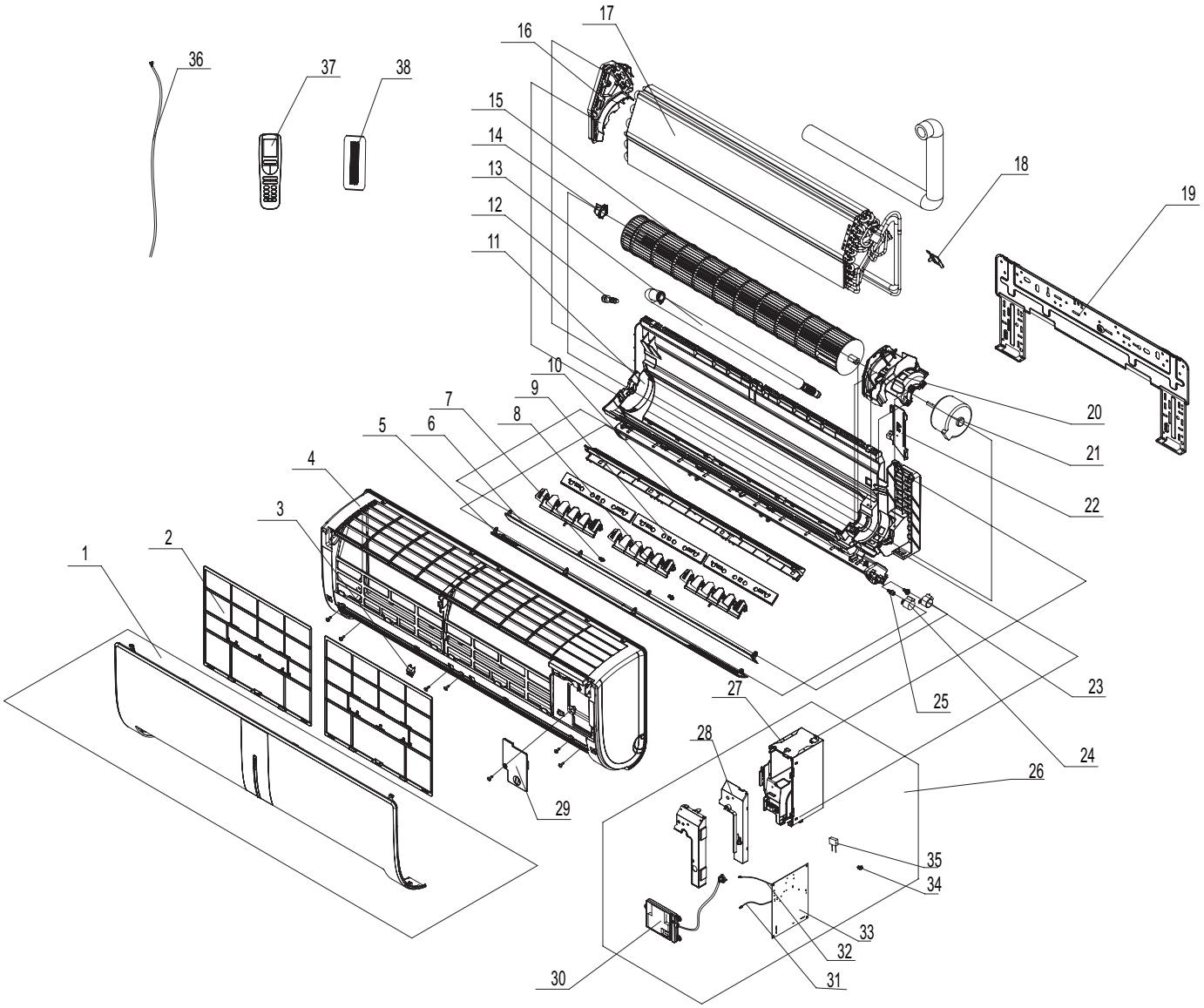
GWH(12)UB-K3DNA1A/I



NO.	Description	Part Code	Qty
		GWH(12)UB-K3DNA1A/I	
	Product Code	CB204N02000	
1	Front Panel Assy	2001285901	1
2	Filter Sub-Assy	11122134	2
3	Screw Cover	24252024	1
4	Front Case Sub-assy	2001272701	1
5	Guide Louver 1	10512214	1
6	Guide Louver 2	10512215	1
7	Air Louver 1	10512184	2
8	Air Louver 2	10512185	1
9	Louver Clamp1	26112263	2
10	Louver Clamp2	26112264	1
11	Helicoid Tongue	26112262	1
12	Rear Case assy	22202220	1
13	Cross Flow Fan	10352041	1
14	Axile Bush Sub-assy	10542024	1
15	Evaporator Support	24212128	1
16	Evaporator Assy	0100229401	1
17	Shield Board (Elbow)	01382010	1
18	Wall Mounting Frame	01252121	1
19	Motor Press Plate	26112261	1
20	Fan Motor	150120874	1
21	Pipe Clamp	26112164	1
22	Rubber Plug (Water Tray)	76712012	1
23	Step Motor	1521212201	1
24	Step Motor	1521210804	1
25	Crank	73012005	2
26	Shaft of Guide Louver	1054202001	6
27	Drainage Hose	05230014	1
28	Electric Box	20112121	1
29	Magnetic Ring	49010104	1
30	Terminal Board	420111041	1
31	Wire Clamp	71010003	1
32	Main Board	301388701	1
33	Electric Box Cover2	2012207507	1
34	Capacitor CBB61	33010002	1
35	Jumper	4202300104	1
36	Upper Shield Cover Sub-assy of Electric Box	01592301	1
37	Electric Box Cover	20122133	1
38	Lower Shield Sub-assy of Electric Box	01592300	1
39	Electric Box Assy	20302655	1
40	Pipe Connection Nut Accessories	06320020	1
41	Ambient Temperature Sensor	390000453	1
42	Connecting Cable	400204056	0
43	Temperature Sensor	390000592	1
44	Display Board	30565133	1
45	Remote Controller	30510134	1

The data above are subject to change without notice.

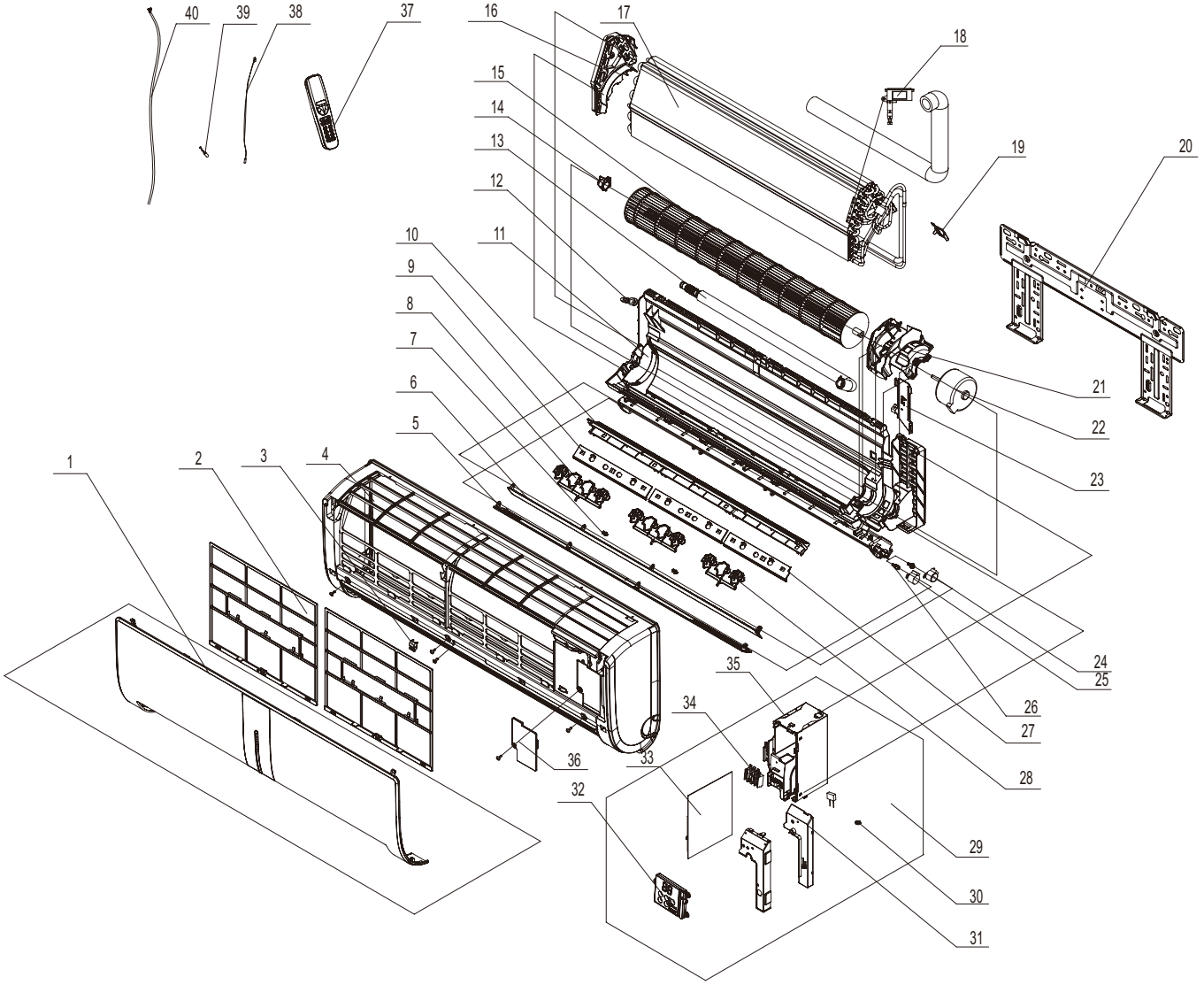
GWH(18)UC-K3DNA1A/I



NO.	Description	Part Code	Qty
		GWH(18)UC-K3DNA1A/I	
	Product Code	CB204N02100	
1	Front Panel Assy	2001280401	1
2	Filter Sub-Assy	11122133	2
3	Screw Cover	24252024	3
4	Front Case Sub-assy	2001280503	1
5	Guide Louver 1	10512222	1
6	Guide Louver 2	10512223	1
7	Shaft of Guide Louver	1054202001	6
8	Air Louver(Manual)	10512221	1
9	Louver Clamp	26112493	1
10	Helicoid Tongue	26112495	1
11	Rear Case assy	22202284	1
12	Drainage Hose	0523001406	1
13	Axile Bush Sub-assy	10542024	1
14	Cross Flow Fan	10352030	1
15	Evaporator Support	24212135	1
16	Evaporator Assy	01002327	1
17	Shield Board (Elbow)	01382010	1
18	Wall Mounting Frame	01252032	1
19	Motor Press Plate	26112295	1
20	Fan Motor	1501209802	1
21	Pipe Clamp	26112164	1
22	Rubber Plug (Water Tray)	76712012	1
23	Step Motor	15212125	1
24	Step Motor	15212126	1
25	Crank	73012005	2
26	Electric Box Assy	20302656	1
27	Electric Box	20112134	1
28	Electric Box Cover	20122158	1
29	Electric Box Cover2	20122159	1
30	Display Board	30565134	1
31	Ambient Temperature Sensor	390000453	1
32	Temperature Sensor	390000592	1
33	Main Board	30138901	1
34	Jumper	4202300111	1
35	Capacitor CBB61	33010034	1
36	Connecting Cable	400204056	0
37	Remote Controller	30510134	1
38	Filter	11122135	1

The data above are subject to change without notice.

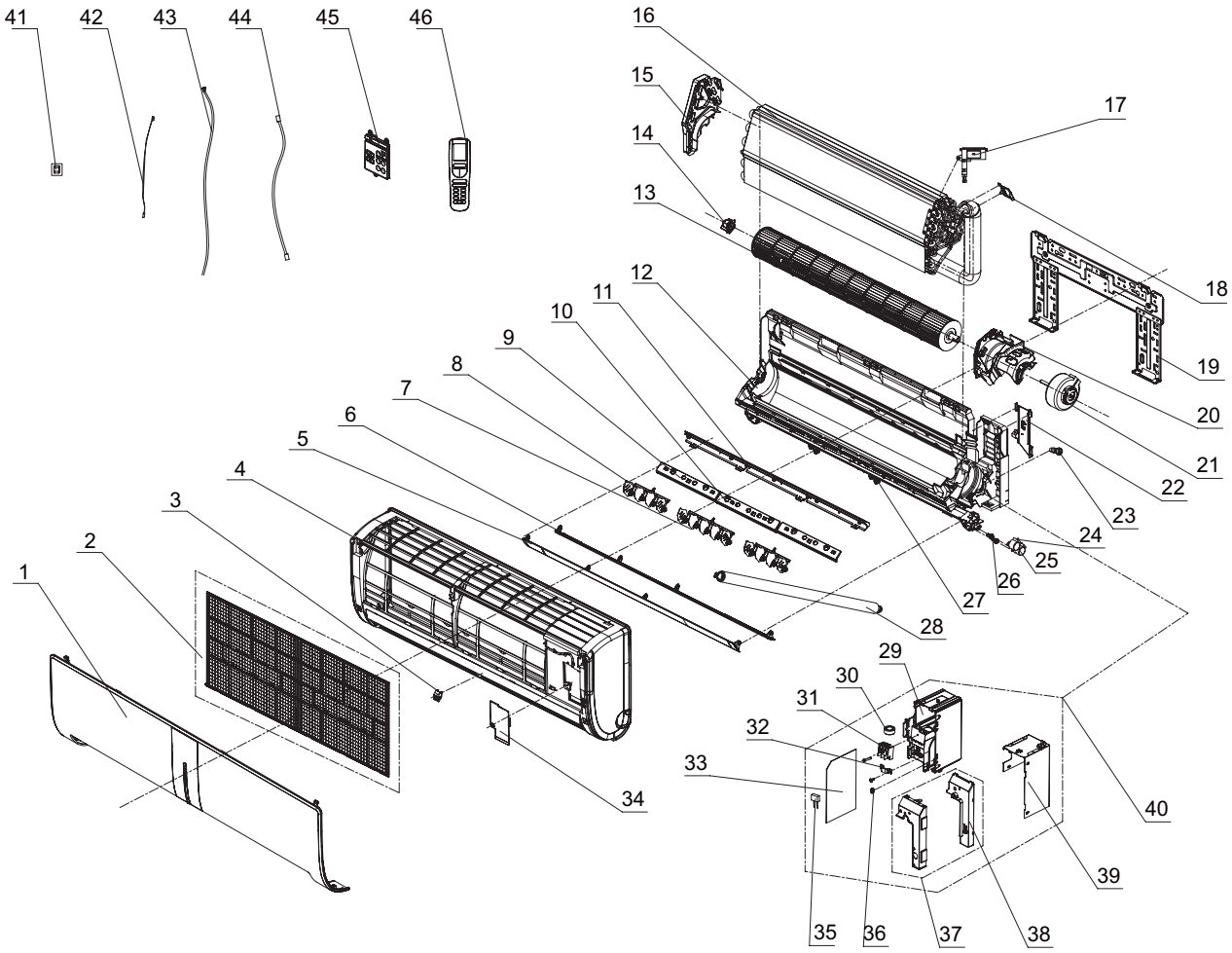
GWH(07)UA-K3DNA1A/I(Cold Plasma)
GWH(09)UA-K3DNA1A/I(Cold Plasma)



NO.	Description	Part Code		Qty
		GWH(07)UA-K3DNA1A/I (Cold Plasma)	GWH(09)UA-K3DNA1A/I (Cold Plasma)	
	Product Code	CB204N01801	CB204N01901	
1	Front Panel Assy	2001269506	2001269506	1
2	Filter Sub-Assy	11122122	11122122	2
3	Screw Cover	24252024	24252024	1
4	Front Case Sub-assy	2001269301	2001269301	1
5	Guide Louver 1	10512218	10512218	1
6	Guide Louver 2	10512219	10512219	1
7	Shaft of Guide Louver	1054202001	1054202001	6
8	Air Louver 1	10512438	10512438	1
9	Louver Clamp1	26112492	26112492	1
10	Helicoid Tongue	26112490	26112490	1
11	Rear Case assy	22202488	22202488	1
12	Rubber Plug (Water Tray)	76712012	76712012	1
13	Drainage Hose	0523001407	0523001407	1
14	Axile Bush Sub-assy	10542024	10542024	1
15	Cross Flow Fan	10352047	10352047	1
16	Evaporator Support	24212132	24212132	1
17	Evaporator Assy	0100263001	0100263001	1
18	Cold Plasma Generator	1114001603	1114001603	1
19	Shield Board (Elbow)	01382010	01382010	1
20	Wall Mounting Frame	01252021	01252021	1
21	Motor Press Plate	26112270	26112270	1
22	Fan Motor	15012125	15012125	1
23	Pipe Clamp	26112164	26112164	1
24	Step Motor	1521212201	1521212201	1
25	Step Motor	1521210804	1521210804	1
26	Crank	73012005	73012005	2
27	Louver Clamp2	26112491	26112491	1
28	Air Louver 2	10512439	10512439	1
29	Electric Box Assy	20302654	20302654	1
30	Jumper	4202300102	4202300102	1
31	Electric Box Cover	2012213301	2012213301	1
32	Display Board	30565133	30565133	1
33	Main Board	301388701	301388701	1
34	Terminal Board	420111041	420111041	1
35	Electric Box	20112121	20112121	1
36	Electric Box Cover2	20122168	20122168	1
37	Remote Controller	30510134	30510134	1
38	Ambient Temperature Sensor	390000453	390000453	1
39	Temperature Sensor	390000592	390000592	1
40	Connecting Cable	400204056	400204056	0

The data above are subject to change without notice.

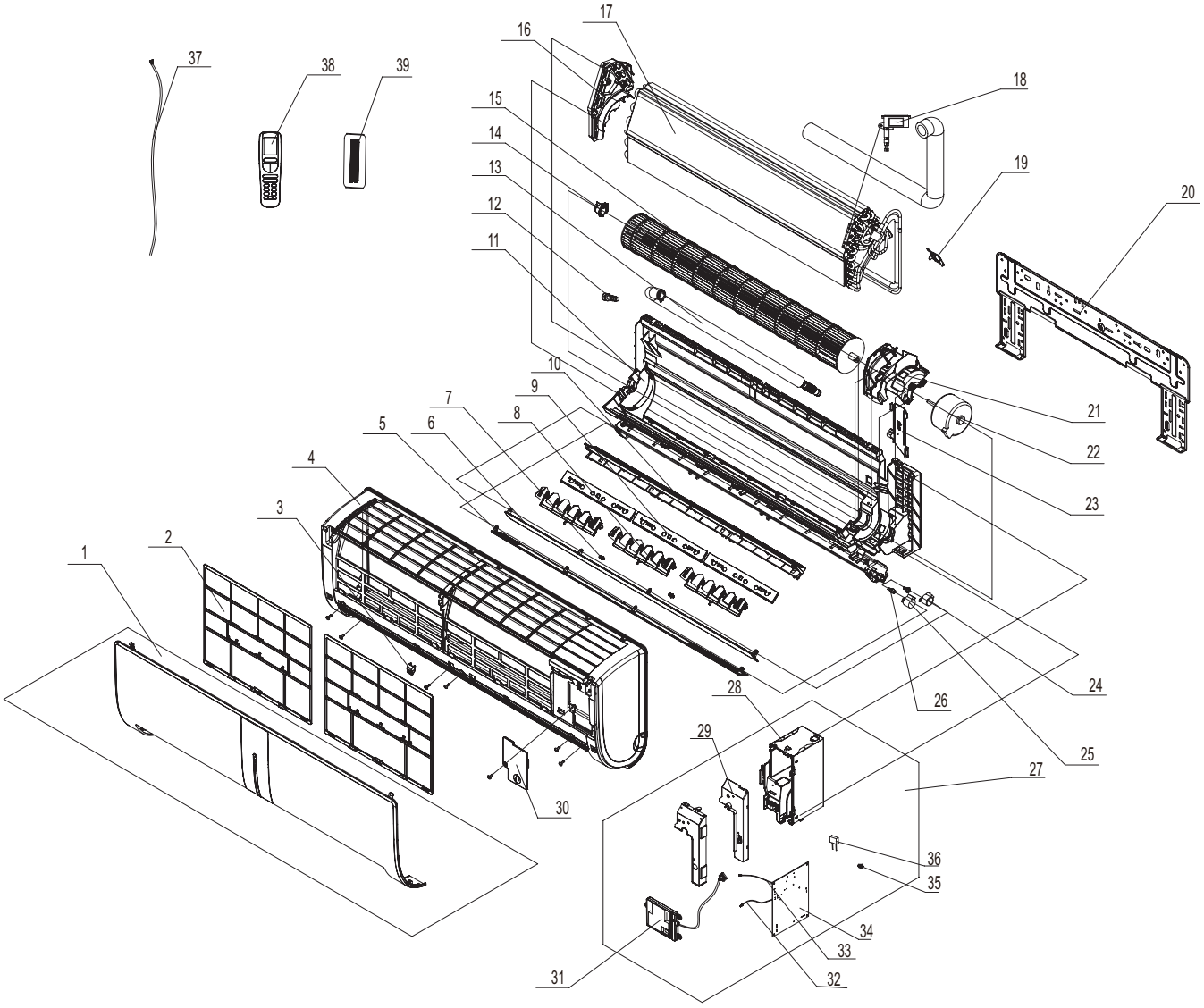
GWH(12)UB-K3DNA1A/I(Cold Plasma)



NO.	Description	Part Code	Qty
		GWH(12)UB-K3DNA1A/I(Cold Plasma)	
	Product Code	CB204N02001	
1	Front Panel Assy	2001285901	1
2	Filter Sub-Assy	11122134	2
3	Screw Cover	24252024	1
4	Front Case Sub-assy	2001272701	1
5	Guide Louver 1	10512214	1
6	Guide Louver 2	10512215	1
7	Air Louver 1	10512184	2
8	Air Louver 2	10512185	1
9	Louver Clamp1	26112263	2
10	Louver Clamp2	26112264	1
11	Helicoid Tongue	26112262	1
12	Rear Case assy	22202220	1
13	Cross Flow Fan	10352041	1
14	Axile Bush Sub-assy	10542024	1
15	Evaporator Support	24212128	1
16	Evaporator Assy	0100229401	1
17	Cold Plasma Generator	1114001603	1
18	Shield Board (Elbow)	01382010	1
19	Wall Mounting Frame	01252121	1
20	Motor Press Plate	26112261	1
21	Fan Motor	150120874	1
22	Pipe Clamp	26112164	1
23	Rubber Plug (Water Tray)	76712012	1
24	Step Motor	1521212201	1
25	Step Motor	1521210804	1
26	Crank	73012005	2
27	Shaft of Guide Louver	1054202001	6
28	Drainage Hose	05230014	1
29	Electric Box	20112121	1
30	Magnetic Ring	49010104	1
31	Terminal Board	420111041	1
32	Wire Clamp	71010003	1
33	Main Board	301388701	1
34	Electric Box Cover2	2012207507	1
35	Capacitor CBB61	33010002	1
36	Jumper	4202300104	1
37	Upper Shield Cover Sub-assy of Electric Box	01592301	1
38	Electric Box Cover	20122133	1
39	Lower Shield Sub-assy of Electric Box	01592300	1
40	Electric Box Assy	20302655	1
41	Pipe Connection Nut Accessories	06320020	1
42	Ambient Temperature Sensor	390000453	1
43	Connecting Cable	400204056	0
44	Temperature Sensor	390000592	1
45	Display Board	30565133	1
46	Remote Controller	30510134	1

The data above are subject to change without notice.

GWH(18)UC-K3DNA1A/I(Cold Plasma)



NO.	Description	Part Code	Qty
		GWH(18)UC-K3DNA1A/I(Cold Plasma)	
	Product Code	CB204N02100	
1	Front Panel Assy	2001280401	1
2	Filter Sub-Assy	11122133	2
3	Screw Cover	24252024	3
4	Front Case Sub-assy	2001280503	1
5	Guide Louver 1	10512222	1
6	Guide Louver 2	10512223	1
7	Shaft of Guide Louver	1054202001	6
8	Air Louver(Manual)	10512221	1
9	Louver Clamp	26112493	1
10	Helicoid Tongue	26112495	1
11	Rear Case assy	22202284	1
12	Drainage Hose	0523001406	1
13	Axile Bush Sub-assy	10542024	1
14	Cross Flow Fan	10352030	1
15	Evaporator Support	24212135	1
16	Evaporator Assy	01002327	1
17	Cold Plasma Generator	1114001603	1
18	Shield Board (Elbow)	01382010	1
19	Wall Mounting Frame	01252032	1
20	Motor Press Plate	26112295	1
21	Fan Motor	1501209802	1
22	Pipe Clamp	26112164	1
23	Rubber Plug (Water Tray)	76712012	1
24	Step Motor	15212125	1
25	Step Motor	15212126	1
26	Crank	73012005	2
27	Electric Box Assy	20302656	1
28	Electric Box	20112134	1
29	Electric Box Cover	20122158	1
30	Electric Box Cover2	20122159	1
31	Display Board	30565134	1
32	Ambient Temperature Sensor	390000453	1
33	Temperature Sensor	390000592	1
34	Main Board	30138901	1
35	Jumper	4202300111	1
36	Capacitor CBB61	33010034	1
37	Connecting Cable	400204056	0
38	Remote Controller	30510134	1
39	Filter	11122135	1

The data above are subject to change without notice.

9. Troubleshooting

9.1 Malfunction Display of Indoor Unit

1. Malfunction display requirement

When there are several malfunctions, they will be displayed circularly.

2. Malfunction display method

(1) Hardware malfunction: immediate display; refer to “malfunction display table”;

(2) Operation state: immediate display; refer to “malfunction display table”;

(3) Other malfunctions: it is displayed after the compressor stops for 200s; refer to “malfunction display table”.

Note: when the compressor is restarted, the malfunction display delay time (200s) is cleared.

(4) When the unit is under limit frequency or frequency drop state, the display can be controlled via remote controller.

3. Malfunction display control

The indicator lamp and dual 8 nixie tube displays shall be synchronized. That is when the indicator lamp blinks, the dual 8 nixie tube displays the corresponding malfunction code.

4. Display control via remote controller

Enter display control: press light button successively for 4 times within 3s to display the corresponding malfunction code;

Exit display control: pressing light button successively for 4 times within 3s or after display is shown for 5min, the display will terminate.

Malfunction Name	Dual-8 Nixie Tube	Indicator Display		
		Operation indicator	Cooling indicator	Heating indicator
Malfunction of jumper cap	C5	blink 15 times		
No feedback from indoor unit's motor	H6	blink 11 times		
Circuit malfunction of zero crossing detection	U8	blink 17 times		
Indoor ambient temperature sensor is open/short-circuited	F1		blink once	
Indoor evaporator temperature sensor is open/short-circuited	F2		blink twice	
Liquid valve temperature sensor is open/short-circuited	b5		blink 19 times	
Gas valve temperature sensor is open/short-circuited	b7		blink 22 times	
module temperature sensor is open/short-circuited	P7			blink 18 times
Outdoor ambient temperature sensor is open/short-circuited	F3		blink 3 times	
Outdoor condenser tube temperature sensor is open/short-circuited	F4		blink 4 times	
Outdoor discharge temperature sensor is open/short-circuited	F5		blink 5 times	
Communication malfunction between indoor and outdoor units	E6	blink 6 times		
Malfunction of phase current circuit detection for compressor	U1			blink 12 times
Module temperature protection	P8			blink 19 times
Charging malfunction of capacitor	PU			blink 17 times
High pressure protection of system	E1	blink once		
Overload protection of compressor	H3			blink 3 times
Wrong connection for communication wire or malfunction of expansion valve (free match)	dn	/	/	/
Wrong connection for communication wire or malfunction detection status of expansion valve (free match)	dd	/	/	/
Mode shock	E7	blink 7 times		
Freon recovery mode	Fo	blink once	blink once	
Defrosting and oil return under heating	H1			blink once
Failure start-up of compressor	Lc			blink 11 times
Discharge high-temperature protection of compressor	E4	blink 4 times		
Overload protection	E8	blink 8 times		
Overcurrent protection of the complete unit	E5	blink 5 times		
Overcurrent protection of phase current	P5			blink 15 times

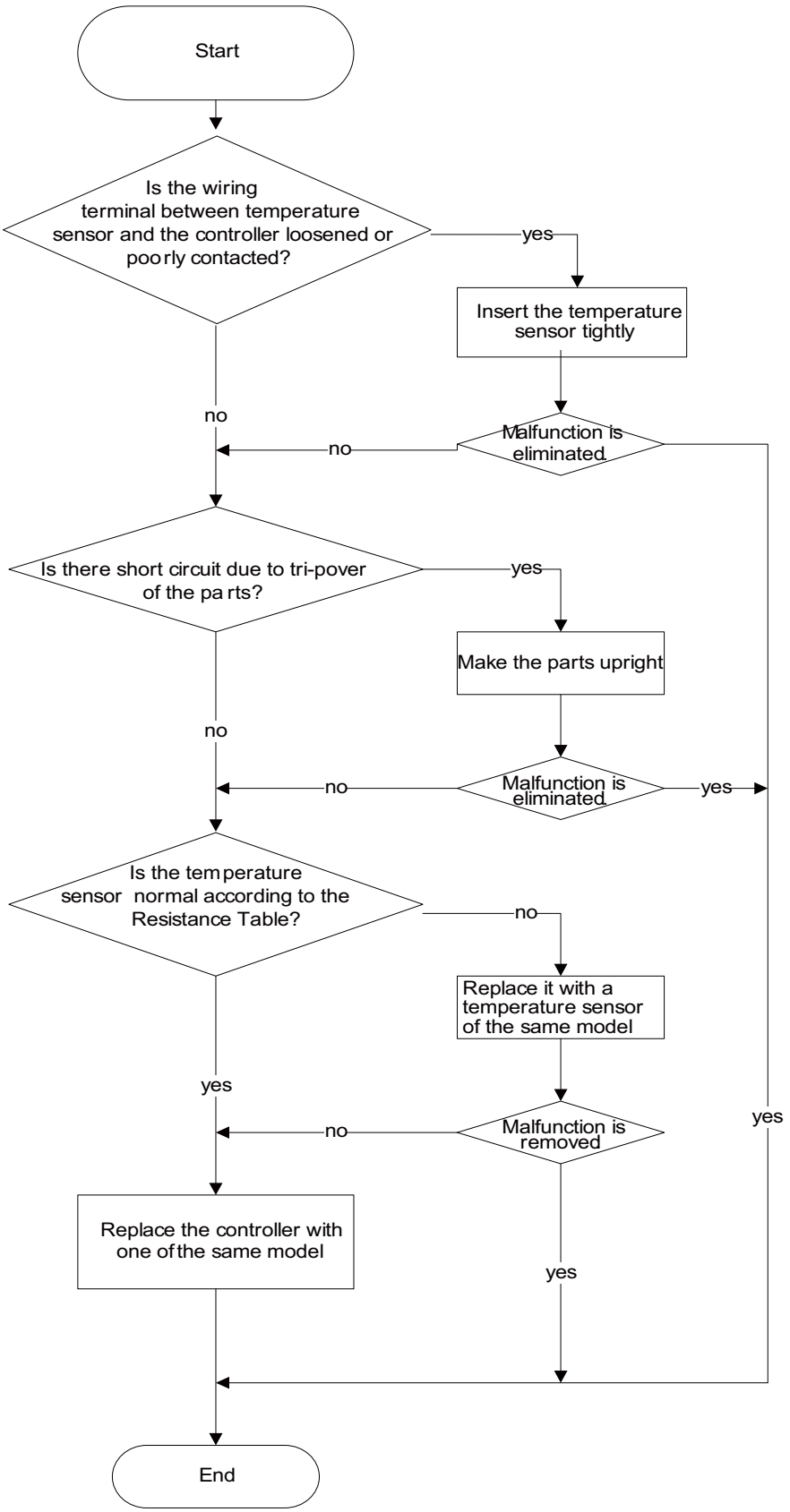
Desynchronizing of compressor	H7			blink 7 times
Loss phase/inverse phase protection for compressor	Ld	/	/	/
Module current protection (IPM protection)	H5			blink 5 times
Low voltage protection of DC bus bar	PL			blink 21 times
High voltage protection of DC bus bar	PH		blink 11 times	
PFC protection	HC			blink 6 times
Limit/decrease frequency due to current protection of the complete unit	F8		blink 8 times	
Limit/decrease frequency due to module current protection (phase current)	En	/	/	/
Limit/decrease frequency due to discharge	F9		blink 9 times	
Limit/decrease frequency due to freeze protection	FH		blink twice	blink twice
Limit/decrease frequency due to overload	F6		blink 6 times	
Limit/decrease frequency due to module temperature protection	EU		blink 6 times	blink 6 times
Oil return under cooling	F7		blink 7 times	
Cold air prevention protection	E9	blink 9 times		
Freeze protection	E2	blink twice		

Display under test state

Dual 8 nixie tube display: minimum cooling (heating)-P0; middle cooling (heating)-P3
Nominal cooling (heating) –P1; maximum cooling (heating) –P2;
Corresponding indicator lamp will be on for 0.3s and off for 0.3s

9.2 How to Check Simply The Main Part

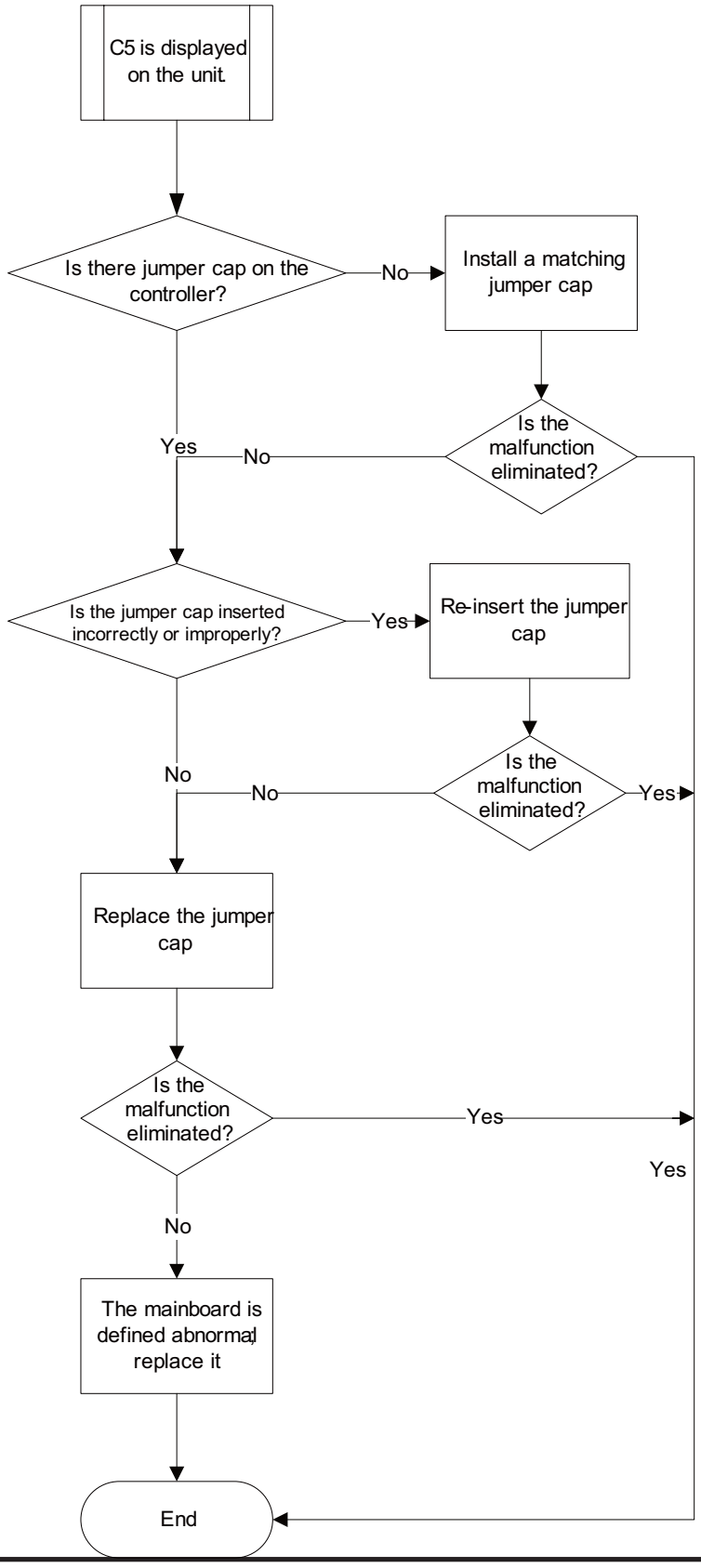
9.2.1 F1/F2 Malfunction



9.2.2 C5 Malfunction

Possible causes:
1. There is no jumper cap on the controller;
2. Jumper cap is not inserted properly and tightly;
3. Jumper cap is damaged;
4. Controller is damaged.

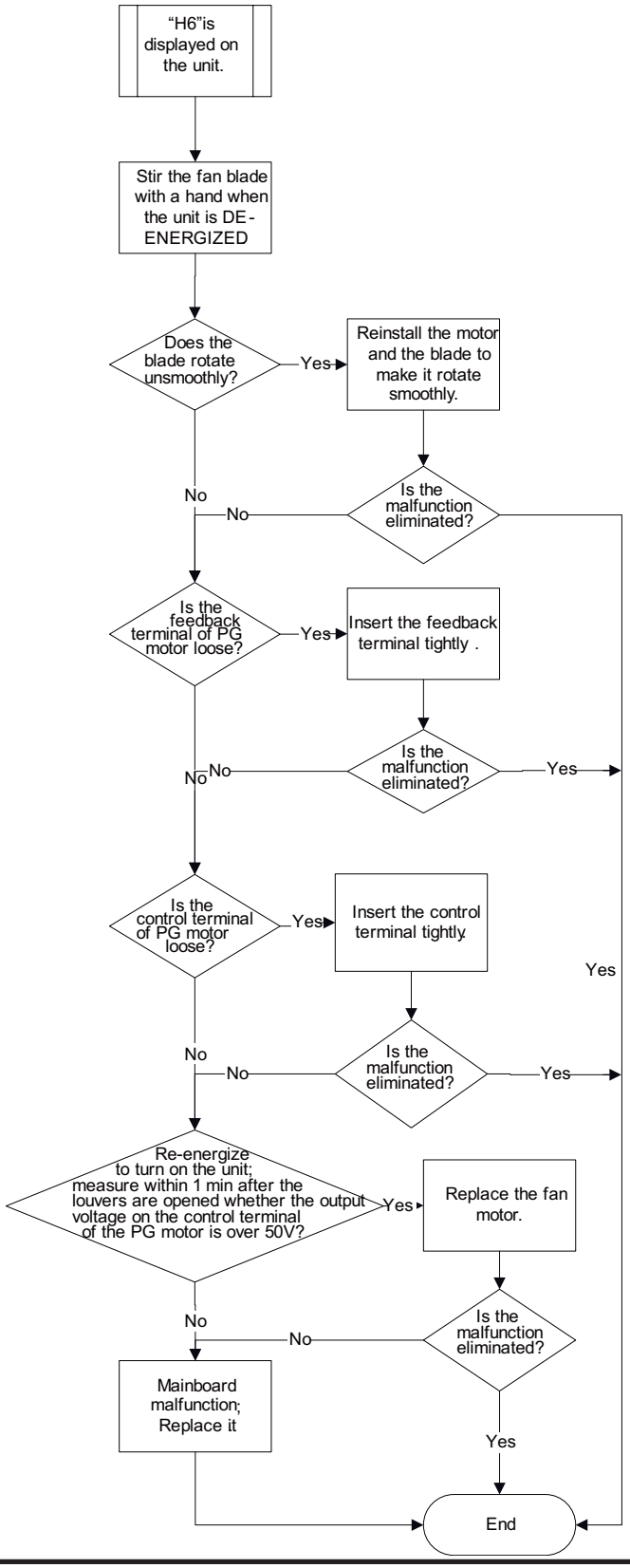
See the flow chart below:



9.2.3 H6 Malfunction

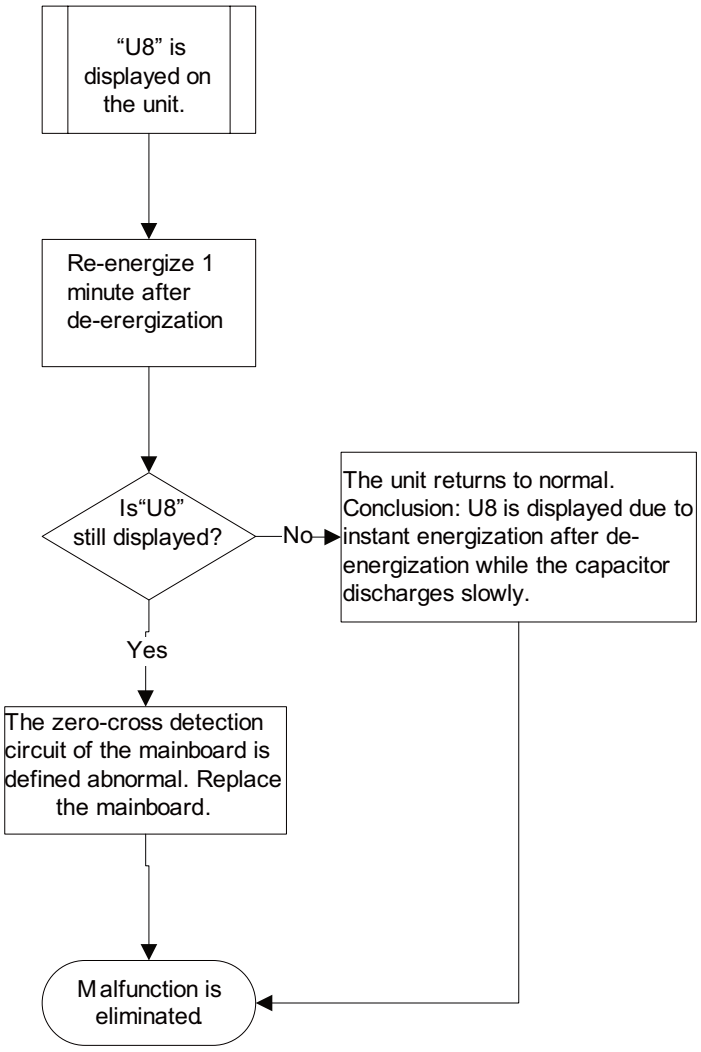
Possible causes:
1. Fan motor is locked;
2. The feedback terminal of PG motor is not connected tightly;
3. The control terminal of PG motor is not connected tightly;
4. Motor is damaged;
5. Malfunction of the rotation speed detection circuit of the mainboard.

See the flow chart below:



9.2.4 U8 Malfunction

Possible causes:
1.The controller diagnoses incorrectly due to instant energization after de-energized while the capacitor discharges slowly;
2.Malfunction of the zero-cross detection circuit of the mainboard.
See the flow chart below:



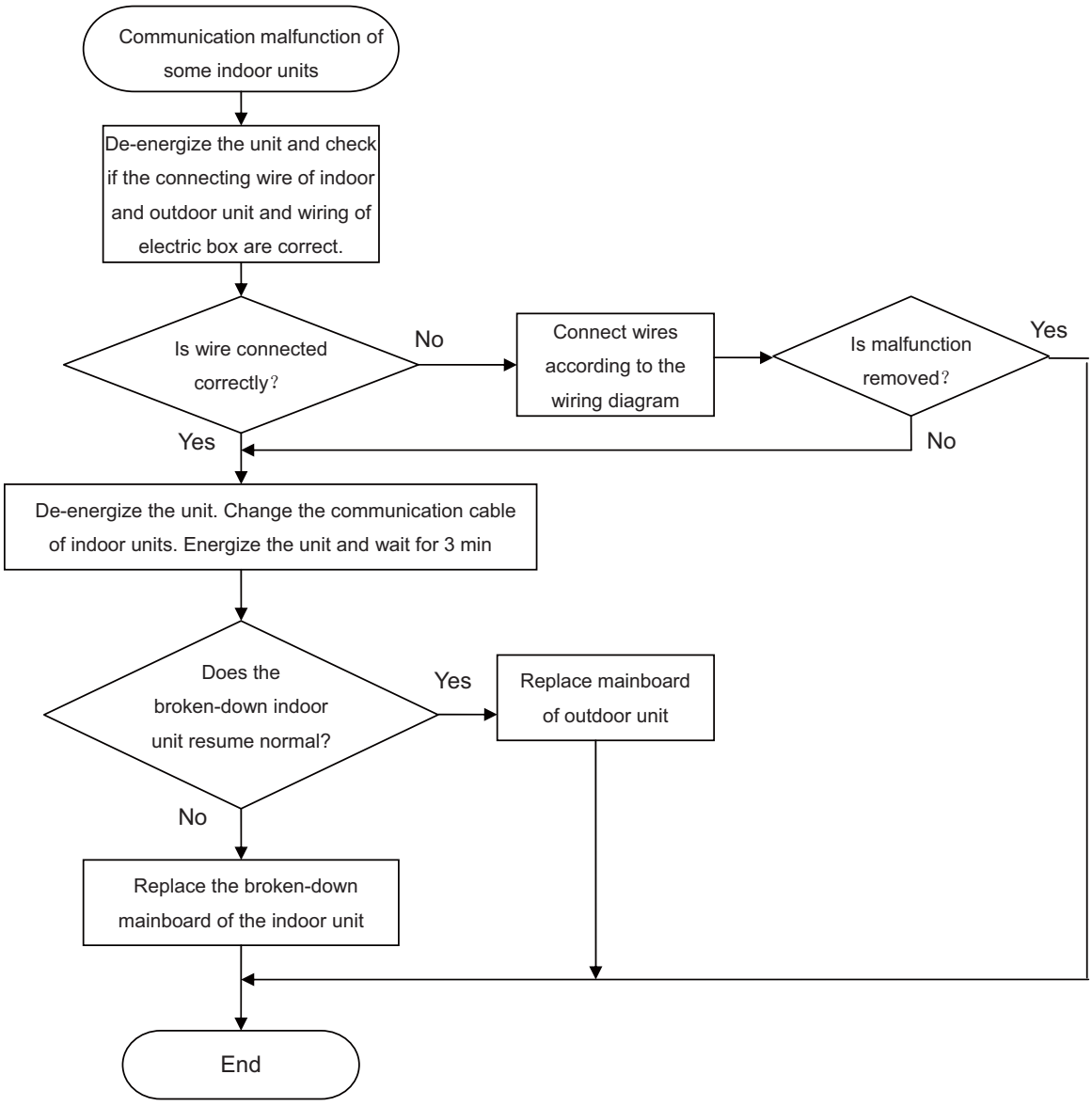
9.2.5 E6 Malfunction

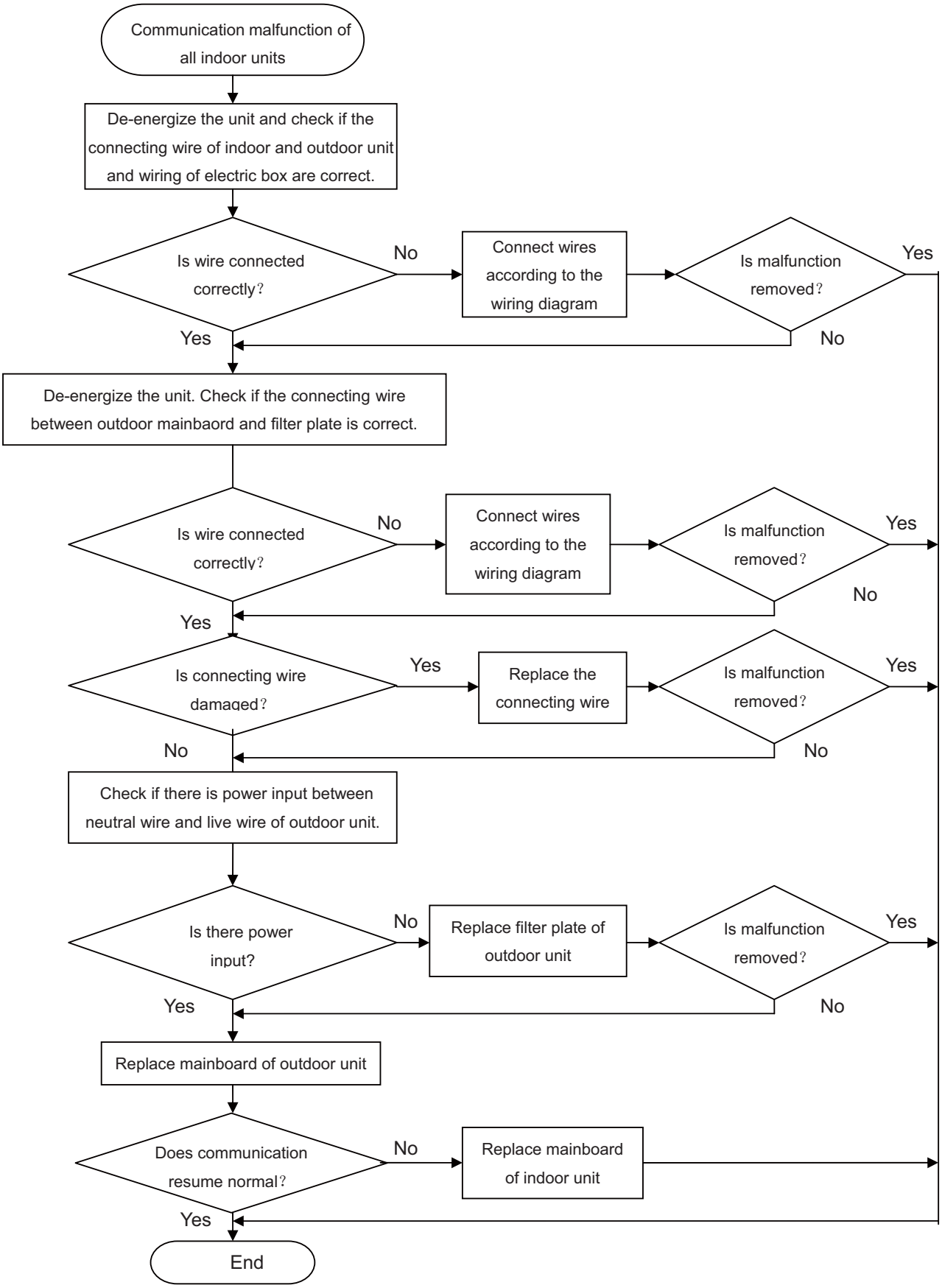
Inspection

1.Check if connection wire between indoor and outdoor units and wire inside the unit are connected well.

2.Check if mainboard of indoor or outdoor unit is damaged.

Flowchart




Communication malfunction of all indoor units
De-energize the unit and check if the connecting wire of indoor and outdoor unit and wiring of electric box are correct.
Is wire connected correctly?
No
Connect wires according to the wiring diagram
Is malfunction removed?
Yes
No
Yes
De-energize the unit. Check if the connecting wire between outdoor mainbaord and filter plate is correct.
Is wire connected correctly?
No
Connect wires according to the wiring diagram
Is malfunction removed?
Yes
No
Yes
Is connecting wire damaged?
Yes
Replace the connecting wire
Is malfunction removed?
Yes
No
No
Check if there is power input between neutral wire and live wire of outdoor unit.
Is there power input?
No
Replace filter plate of outdoor unit
Is malfunction removed?
Yes
No
Yes
Replace mainboard of outdoor unit
Does communication resume normal?
No
Replace mainboard of indoor unit
Yes
End

Appendix 1: Resistance Table for Indoor and Outdoor Ambient Temperature Sensors (15K)							
Temp.(℃)	Resistance(kΩ)	Temp.(℃)	Resistance(kΩ)	Temp.(℃)	Resistance(kΩ)	Temp.(℃)	Resistance(kΩ)
-19	138.1	20	18.75	59	3.848	98	1.071
-18	128.6	21	17.93	60	3.711	99	1.039
-17	121.6	22	17.14	61	3.579	100	1.009
-16	115	23	16.39	62	3.454	101	0.98
-15	108.7	24	15.68	63	3.333	102	0.952
-14	102.9	25	15	64	3.217	103	0.925
-13	97.4	26	14.36	65	3.105	104	0.898
-12	92.22	27	13.74	66	2.998	105	0.873
-11	87.35	28	13.16	67	2.896	106	0.848
-10	82.75	29	12.6	68	2.797	107	0.825
-9	78.43	30	12.07	69	2.702	108	0.802
-8	74.35	31	11.57	70	2.611	109	0.779
-7	70.5	32	11.09	71	2.523	110	0.758
-6	66.88	33	10.63	72	2.439	111	0.737
-5	63.46	34	10.2	73	2.358	112	0.717
-4	60.23	35	9.779	74	2.28	113	0.697
-3	57.18	36	9.382	75	2.206	114	0.678
-2	54.31	37	9.003	76	2.133	115	0.66
-1	51.59	38	8.642	77	2.064	116	0.642
0	49.02	39	8.297	78	1.997	117	0.625
1	46.6	40	7.967	79	1.933	118	0.608
2	44.31	41	7.653	80	1.871	119	0.592
3	42.14	42	7.352	81	1.811	120	0.577
4	40.09	43	7.065	82	1.754	121	0.561
5	38.15	44	6.791	83	1.699	122	0.547
6	36.32	45	6.529	84	1.645	123	0.532
7	34.58	46	6.278	85	1.594	124	0.519
8	32.94	47	6.038	86	1.544	125	0.505
9	31.38	48	5.809	87	1.497	126	0.492
10	29.9	49	5.589	88	1.451	127	0.48
11	28.51	50	5.379	89	1.408	128	0.467
12	27.18	51	5.197	90	1.363	129	0.456
13	25.92	52	4.986	91	1.322	130	0.444
14	24.73	53	4.802	92	1.282	131	0.433
15	23.6	54	4.625	93	1.244	132	0.422
16	22.53	55	4.456	94	1.207	133	0.412
17	21.51	56	4.294	95	1.171	134	0.401
18	20.54	57	4.139	96	1.136	135	0.391
19	19.63	58	3.99	97	1.103	136	0.382

Appendix 2: Resistance Table for Indoor and Outdoor Tube Temperature Sensor (20K)							
Temp.(℃)	Resistance(kΩ)	Temp.(℃)	Resistance(kΩ)	Temp.(℃)	Resistance(kΩ)	Temp.(℃)	Resistance(kΩ)
-19	181.4	20	25.01	59	5.13	98	1.427
-18	171.4	21	23.9	60	4.948	99	1.386
-17	162.1	22	22.85	61	4.773	100	1.346
-16	153.3	23	21.85	62	4.605	101	1.307
-15	145	24	20.9	63	4.443	102	1.269
-14	137.2	25	20	64	4.289	103	1.233
-13	129.9	26	19.14	65	4.14	104	1.198
-12	123	27	18.13	66	3.998	105	1.164
-11	116.5	28	17.55	67	3.861	106	1.131
-10	110.3	29	16.8	68	3.729	107	1.099
-9	104.6	30	16.1	69	3.603	108	1.069
-8	99.13	31	15.43	70	3.481	109	1.039
-7	94	32	14.79	71	3.364	110	1.01
-6	89.17	33	14.18	72	3.252	111	0.983
-5	84.61	34	13.59	73	3.144	112	0.956
-4	80.31	35	13.04	74	3.04	113	0.93
-3	76.24	36	12.51	75	2.94	114	0.904
-2	72.41	37	12	76	2.844	115	0.88
-1	68.79	38	11.52	77	2.752	116	0.856
0	65.37	39	11.06	78	2.663	117	0.833
1	62.13	40	10.62	79	2.577	118	0.811
2	59.08	41	10.2	80	2.495	119	0.77
3	56.19	42	9.803	81	2.415	120	0.769
4	53.46	43	9.42	82	2.339	121	0.746
5	50.87	44	9.054	83	2.265	122	0.729
6	48.42	45	8.705	84	2.194	123	0.71
7	46.11	46	8.37	85	2.125	124	0.692
8	43.92	47	8.051	86	2.059	125	0.674
9	41.84	48	7.745	87	1.996	126	0.658
10	39.87	49	7.453	88	1.934	127	0.64
11	38.01	50	7.173	89	1.875	128	0.623
12	36.24	51	6.905	90	1.818	129	0.607
13	34.57	52	6.648	91	1.736	130	0.592
14	32.98	53	6.403	92	1.71	131	0.577
15	31.47	54	6.167	93	1.658	132	0.563
16	30.04	55	5.942	94	1.609	133	0.549
17	28.68	56	5.726	95	1.561	134	0.535
18	27.39	57	5.519	96	1.515	135	0.521
19	26.17	58	5.32	97	1.47	136	0.509

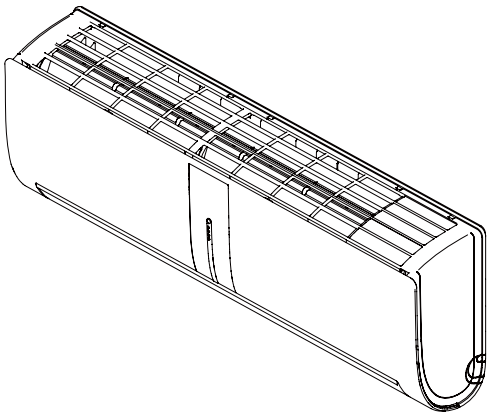
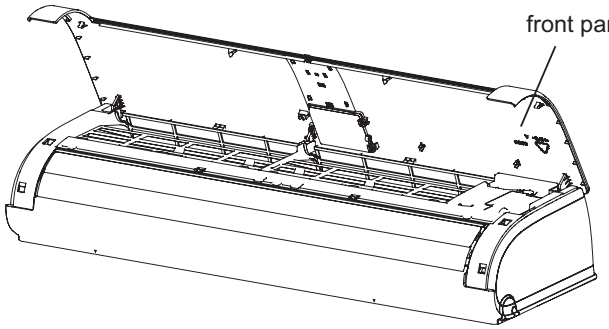
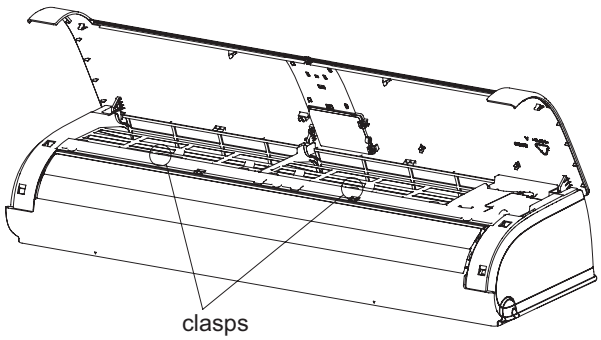
Appendix 3: Resistance Table for Outdoor Discharge Temperature Sensor (50K)							
Temp.（℃）	Resistance（kΩ）	Temp.（℃）	Resistance（kΩ）	Temp.（℃）	Resistance（kΩ）	Temp.（℃）	Resistance（kΩ）
-29	853.5	10	98	49	18.34	88	4.754
-28	799.8	11	93.42	50	17.65	89	4.609
-27	750	12	89.07	51	16.99	90	4.469
-26	703.8	13	84.95	52	16.36	91	4.334
-25	660.8	14	81.05	53	15.75	92	4.204
-24	620.8	15	77.35	54	15.17	93	4.079
-23	580.6	16	73.83	55	14.62	94	3.958
-22	548.9	17	70.5	56	14.09	95	3.841
-21	516.6	18	67.34	57	13.58	96	3.728
-20	486.5	19	64.33	58	13.09	97	3.619
-19	458.3	20	61.48	59	12.62	98	3.514
-18	432	21	58.77	60	12.17	99	3.413
-17	407.4	22	56.19	61	11.74	100	3.315
-16	384.5	23	53.74	62	11.32	101	3.22
-15	362.9	24	51.41	63	10.93	102	3.129
-14	342.8	25	49.19	64	10.54	103	3.04
-13	323.9	26	47.08	65	10.18	104	2.955
-12	306.2	27	45.07	66	9.827	105	2.872
-11	289.6	28	43.16	67	9.489	106	2.792
-10	274	29	41.34	68	9.165	107	2.715
-9	259.3	30	39.61	69	8.854	108	2.64
-8	245.6	31	37.96	70	8.555	109	2.568
-7	232.6	32	36.38	71	8.268	110	2.498
-6	220.5	33	34.88	72	7.991	111	2.431
-5	209	34	33.45	73	7.726	112	2.365
-4	198.3	35	32.09	74	7.47	113	2.302
-3	199.1	36	30.79	75	7.224	114	2.241
-2	178.5	37	29.54	76	6.998	115	2.182
-1	169.5	38	28.36	77	6.761	116	2.124
0	161	39	27.23	78	6.542	117	2.069
1	153	40	26.15	79	6.331	118	2.015
2	145.4	41	25.11	80	6.129	119	1.963
3	138.3	42	24.13	81	5.933	120	1.912
4	131.5	43	23.19	82	5.746	121	1.863
5	125.1	44	22.29	83	5.565	122	1.816
6	119.1	45	21.43	84	5.39	123	1.77
7	113.4	46	20.6	85	5.222	124	1.725
8	108	47	19.81	86	5.06	125	1.682
9	102.8	48	19.06	87	4.904	126	1.64

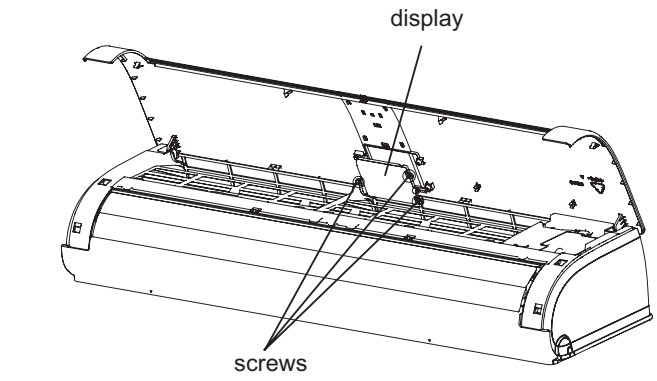
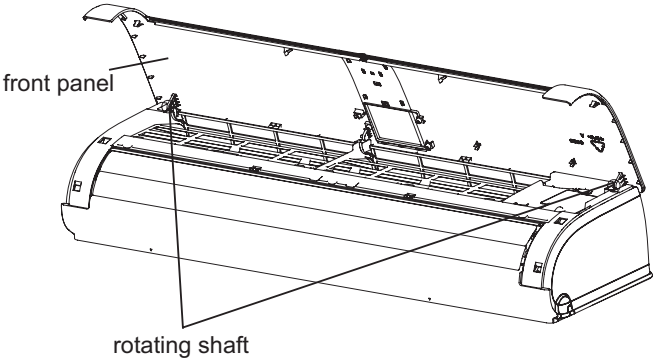
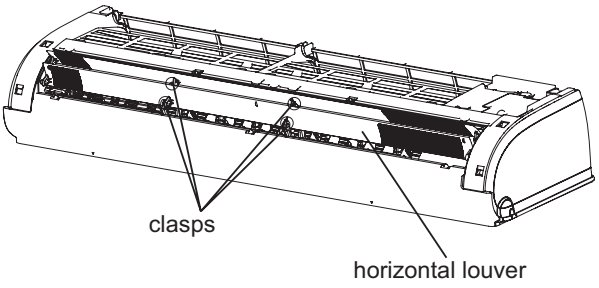
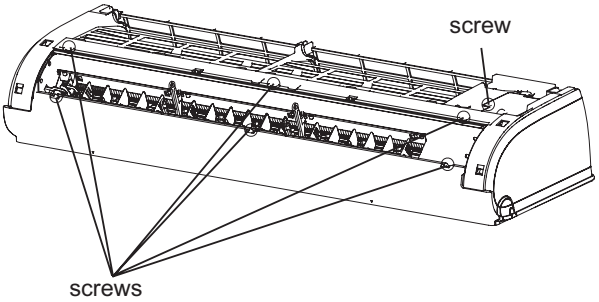
Note: The information above is for reference only.

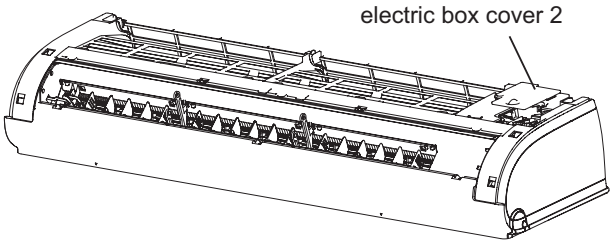
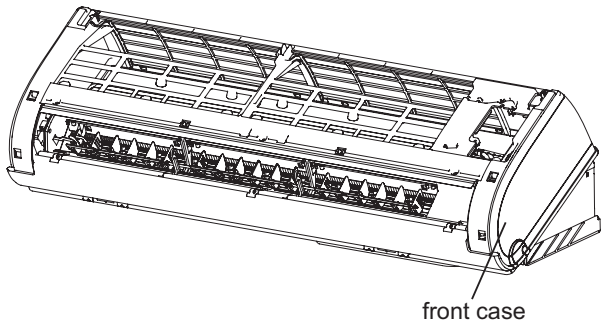
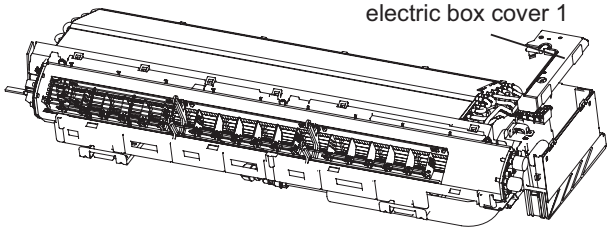
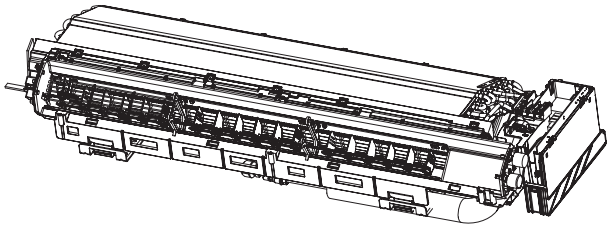
10. Removal Procedure

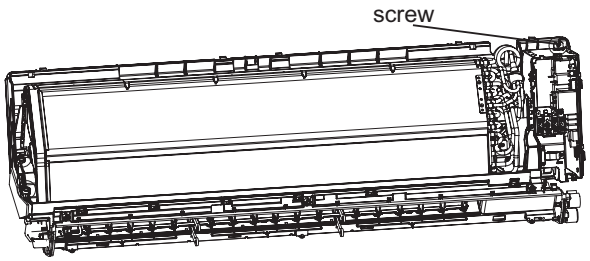
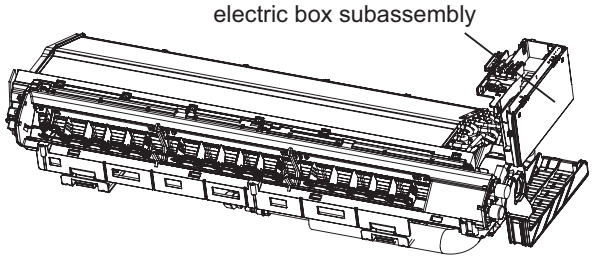
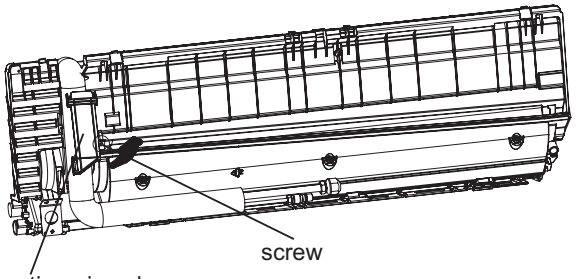
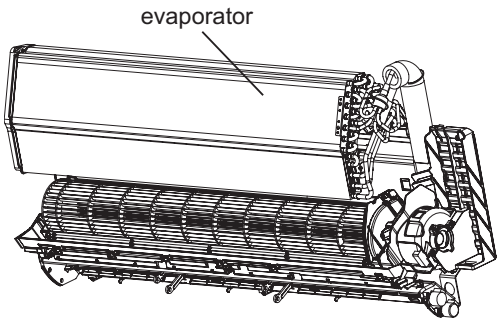
⚠ Warning Be sure to wait for a minimum of 10 minutes after turning off all power supplies before disassembly.

Take GWH18UC-D3DNA1A/I for example.

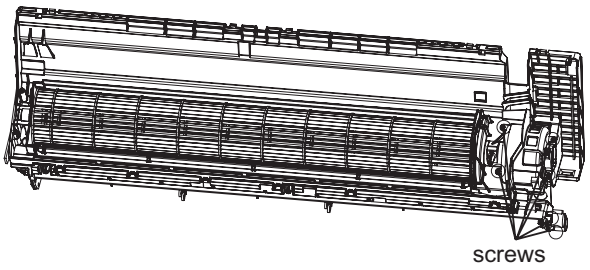
Steps	Procedure	
1. Before disassembly		
		
2. Remove filter		
1	Loosen clasps on both sides of front panel and open front panel.	
2	Loosen clasps on filter and push the filter inwards. Then lift it up to remove it.	

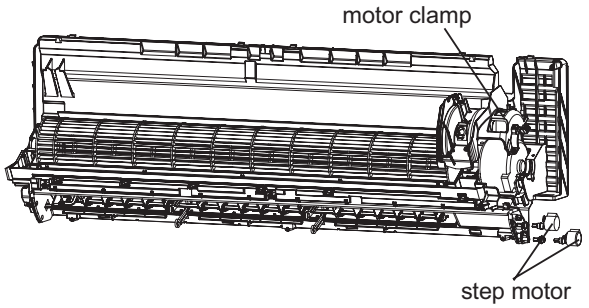
Steps	Procedure	
3. Remove front panel		
	Remove screws fixing display on front panel. Slide rotating shaft of front panel along the groove to remove the front panel.	
4. Remove horizontal louver		
	Remove axle sleeve of horizontal louver and bend the horizontal louver. Then draw it outwards to remove it.	
5. Remove front case		
1	Open screw caps and remove 6 screws fixing front case and 1 screw on electric box cover 2.	

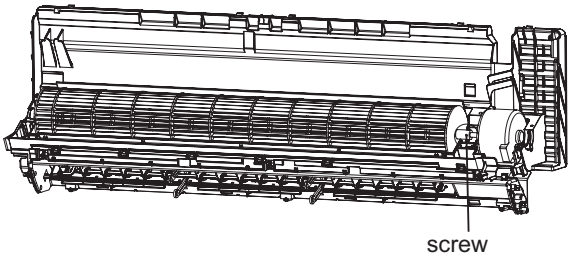
Steps	Procedure	
2	Remove electric box cover 2	
3	Loosen clasps on the rear of front case. Lift the front case up to remove it.	
6. Remove electric box subassembly		
1	Loosen clasps on the joint of electric box cover 1 and electric box. Then remove electric box cover 1.	
2	Unplug splicing ear of motor and step motor inside electric box.	

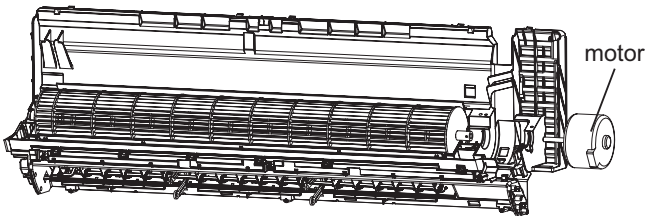
Steps	Procedure	
3	Remove screw fixing electric box.	
4	Remove electric box subassembly.	
7. Remove evaporator		
1	Remove screws on connecting pipe clamp and then remove the connecting pipe clamp.	
2	Remove screws on the joint of evaporator and rear case. Slightly adjust pipe of evaporator and then remove evaporator.	

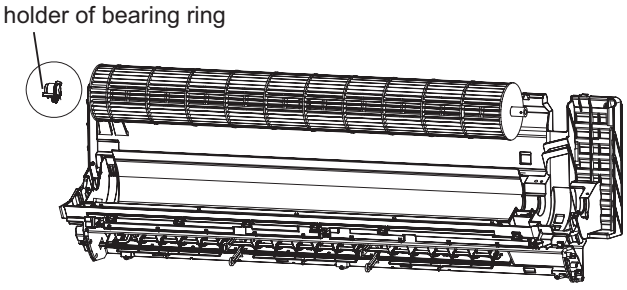
Steps	Procedure
8. Remove cross flow fan blade and motor	
1	Remove screws fixing motor clamp and step motor.
2	Remove motor clamp and step motor.
3	Remove screws on the joint of cross flow fan blade and motor.
4	Remove motor.
5	Unplug holder of bearing ring.



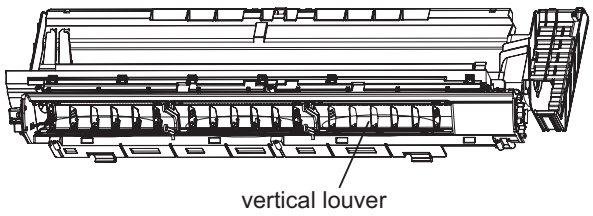


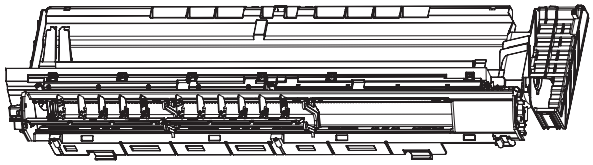






Steps	Procedure
9. Remove vertical louver	
	Loosen clasps between vertical louver and rear case. Then remove vertical louver.





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GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI

Add: West Jinji Rd, Qianshan, Zhuhai, Guangdong, China, 519070
Tel: (+86-756) 8522218 Fax: (+86-756) 8669426
E-mail: gree@gree.com.cn www.gree.com